FORM AND ORBITAL TONALITY IN THE FINALE OF BRUCKNER'S SEVENTH SYMPHONY

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Introduction: Reception History and the Problem of Bucknerian Form

Reviewing the Viennese premiere on 21st March 1886, Gustav Dömpke dismissed Bruckner's Seventh Symphony with caustic prose. Challenging the status of Wagnerian *cause célèbre* that the work had attracted since its Munich performance under Herman Levi on 10th March 1885, Dömpke heard only technical incompetence, stylistic heterogeneity and aesthetic mendacity:

> Bruckner lacks the feeling for the basic elements of any musical structure and for the combination of a series of integral harmonic and melodic parts; it has forsaken him if he ever possessed it. … Bruckner composes like a drunkard. He is a past master in deception, and his imagination is swamped by the most heterogeneous dregs of Beethoven's and Wagner's music without the balance of an intellect which is capable of sifting these influences according to their value and essential ingredients. (Göllerich/Auer 1974, vol. 4/ii, p. 438, trans. in Howie 2002, p. 508)

Dömpke's review apostrophises themes in the Seventh's Viennese-liberal reception, which are consistent with Brahmsian objections to Bruckner's symphonic style in general:[1] in thrall to a weakly understood Wagnerism, Bruckner lacked technique, and therefore could not conceive and execute a coherent symphonic argument. Rather, his music is fragmentary, illogical and driven by a kind of melodic immediacy, which is ill-suited to Beethovenian forms.

Remote as the Seventh now seems from such barbed commentary, complaints of illogicality, heterogeneity, incompetence and incoherence have endured, notwithstanding attempts at rebuttal; as Benjamin Korstvedt notes, in Britain and the US especially, 'prevalent views of Bruckner remain tinged by presumptions traceable to criticisms from the 1880s and 1890s' (Korstvedt 2010, p. 192). In the analytical discourse, the technical issues Dömpke raised (albeit crudely) are far from settled. Concerted early twentieth-century Germanic efforts to install the symphonies as paradigms of absolute-musical coherence (Halm 1913 and 1923; Kurth 1925; Grunsky 1925) have not bequeathed a stable Anglophone heritage, in stark

contrast to Brahms, whose music evidenced best practice for the Schoenbergian and Schenkerian traditions inherited by transatlantic music theory.[2]

The question of discontinuity – Bruckner's lack of 'feeling … for the combination of a series of integral harmonic and melodic parts' – is central to this resistance. It permeated Heinrich Schenker's critique of Bruckner (1893, 1937, 1987 and 2005) and resurfaced in the dispute between Edward Laufer and Derrick Puffett over Schenkerian theory's applicability to the Adagio of the Ninth Symphony, with Laufer arguing *contra* Schenker for the unifying force of middleground linear progressions and Puffett rejecting linear analysis altogether in favour of a disjunctive, 'periodic' reading (Laufer 1997; Puffett 1999). As recently as 2007, Margaret Notley could still orientate Bruckner's forms negatively in relation to Brahms on the grounds of irrationality. Noting the unease with which Dömpke, Hanslick and Kalbeck greeted Bruckner's String Quintet of 1879, Notley revived their claim that the work evidences inspiration without intellectual mediation:

> As Kalbeck remarked, not only Bruckner's harmonic progressions [in the first movement of the Quintet], but also his dynamics sound 'capricious and arbitrary', as do, I would add, his declamatory pauses and unison textures: the use of these, as of *Steigerungen*, has little to do with formal considerations. To ears accustomed to Brahms's compositional choices, many passages in Bruckner's first movement sound, as they did at the time, perplexing, 'illogical'. (Notley 2007, p. 27)

Apologists have generally sought to make a virtue out of these alleged eccentricities. Ernst Kurth (1925) for example subordinated the details of Bruckner's motivic processes to broader, kinetically motivated 'wave' forms, which comprise the music's real formal essence. To emphasise the disjunctions between themes is for Kurth to ignore the ways in which their gestural design reflects large-scale processes of intensification and discharge, which are incipient in intrathematic details. Coherence, in these terms, is not a matter of developing variation, but of the nesting of intensification processes at different formal levels.[3] More recently, Korstvedt has argued that the sheer autonomy of Bruckner's themes overrides 'classic-romantic' symphonic continuities, creating formal processes that privilege thematic self-sufficiency:

> The infusion of 'developmental' devices into areas devoted to thematic exposition, and in turn recapitulation, is facilitated by the schematic aspects of Bruckner's conception of form, which makes possible the structural balancing of large sections regardless of their content and apparent function and which also ameliorates the importance of thematic antagonism as a generative force of sonata form. … Perhaps it is that Bruckner's contrasts are so sharply

> drawn … that the individual parts remain too autonomous to submit easily to the impression of seamless formal totality. (Korstvedt 2004, pp. 187–8)

Korstvedt mobilises the concept of the Romantic fragment by way of explanation: Bruckner in effect makes Brahmsian motivic coherence subservient to a gigantic system of symphonic fragments (Korstvedt 2004, p. 188, citing Rosen 1996, pp. 41–115).[4]

These issues have special urgency for Bruckner's finales, as the locus of post-Beethovenian symphonic resolution. For Dömpke, the Seventh's inadequacies crystallised in its Finale, which he denigrated as poorly composed and unfit for its summative responsibilities: 'There is unanimous agreement that the Finale is the weakest and most chaotic part of the Symphony. Even the eulogists tend to agree. Its motto ought to be: "Parturient montes, nascetur ridiculus mus". Not only the opening, but the movement as a whole appears to have been swept together with a broom' (Howie 2002, p. 509).[5] Robert Simpson countered such accusations with special pleading, arguing that Bruckner struggled towards a finale type differing from both classical and romantic precedents, which are consequently unreasonable comparators: 'The energy of the classical finale is a resultant force. The rhetoric of a romantic finale is an emotional and not always very intelligent reaction. … The type of Bruckner finale … is neither resultant nor reaction … [but] rather the final intensification of an essence' (1992, p. 103). Simpson therefore distanced the Seventh's Finale from any formal orthodoxy, insisting instead that the form is best understood *sui generis*: 'its unique organization is describable only in its own terms and if we are to feel its immense cogency and the utter originality of it we must give up the comforting prop of any familiar yardstick' (1992, p. 186).

This essay confronts the formal questions raised by the Seventh's Finale as symptomatic of pressing issues in both the reception of Bruckner's symphonies and the theory of Romantic and post-Romantic form. It locates the movement's principal analytical challenge in its address on the problem of the reversed recapitulation: adjudication of this idea is central to considerations of form and the circumscribing field of theoretical debate. The close pairing, in the Brahmsian critique, of heterogeneity and harmonic incoherence however suggests that problems of form are inseparable from problems of harmony. Dömpke was vocal on this subject, complaining that Bruckner 'does not recognise anything which resembles the necessity for regularity in chord sequence and periodic structure'; rather 'in Bruckner's modulatory and periodic structures we find the most purposeless breadth as well as the most startling rashness and lack of reason' (Howie 2002, p. 508).[6] My central theoretical claim is consequently that a theory of Brucknerian form is attendant upon a theory of tonality: no formal analysis will succeed until it has consolidated a harmonic approach.

To this end, I develop a novel method, which ramifies voice-leading analysis, neo-Riemannian theory and the idea of the double-tonic complex under the concept of 'orbital' tonality, in order to bring Bruckner's music into dialogue with recent formal theories placing a high value on harmonic syntax, notably William Caplin's theory of formal functions and the sonata theory of James Hepokoski and Warren Darcy (Caplin 1998 and 2013; Hepokoski and Darcy 2006). The key to the Finale's form, I argue, lies in a coordination of formal function, harmonic chromaticism and tonal strategy, which challenges the most basic tenets of classically orientated *Formenlehre*. Our ability to dispel the Brahmsian critique depends crucially on our capacity to theorise this threefold interaction.

The Reversed Recapitulation and the 'Type-2' Sonata

The disparity between current *Formenlehre* and Bruckner's practice becomes clear when we test readings of the Seventh's Finale as a sonata with reversed recapitulation against sonata-theoretical views on reversal as an aspect of high-classical practice. Ostensibly, the movement is a clear-cut case, as mapped in Table 1 [**insert Table 1 near here**]: Bruckner composes his customary three-subject exposition (main theme A, bars 1–19[1]; transition TR, bars 19–34; second group B in bars 35–92; third group C in bars 93–144), which returns in reversed order (C, bars 191–212; B, bars 213–246; TR bars 247–274; A, bars 275–314), bisected by a development and rounded with a coda from bar 315. For Timothy L. Jackson, this scheme constitutes a variant of 'tragic reversed sonata form' (Jackson 1997, pp. 187–90). Situating Bruckner's Finale within a survey of works from Haydn's Symphony No. 44 to Schoenberg's Second and Third string quartets, and mobilising Hepokoski's work on Sibelius and Strauss by way of authority, Jackson explains the reversed recapitulation as a 'deformation' of the '"textbook" sonata form', which in its high-classical and post-classical variants acquired tragic connotations, thanks to the Aristotelian association of reversal with the poetics of tragedy, captured in the notion of *peripeteia* (Jackson 1997, pp. 140–9; Hepokoski 1992 and 1993).[7] This association is conveyed in the Seventh's case by the Finale's underlying tension between diatonic and augmented divisions of the octave. The tonic and its near relations control the A theme (I), the initial stages of the C group (iv), the development (iv), and the C-group reprise (v); the augmented triad relates the A group to the B theme (which begins in A flat), the end of the C group (in C major) and the B-group reprise (also initially in C). For Jackson, the C theme's dominant-minor return constitutes a structural 'catastrophe' – the Finale's defining tragic event (1997, pp. 187–90). This is in effect a moment of tonal alienation, because V is not structural at this point, but is rather a bass passing note on its way to C at the start of the second-group reprise. The recovery of V as dominant becomes the ultimate task of the A-group recapitulation.

Rather than reinforcing the significance Jackson posits for the reversed recapitulation, recent *Formenlehre* has questioned the concept's validity. Its death knell was sounded by Hepokoski and Darcy's formulation of the 'type 2', or binary sonata (2006, pp. 353–87). Their difficulties with reversal reflect the core roles played in their theory by rotation and the 'essential sonata trajectory' or EST. The reversed recapitulation's Achilles heel is the absence of an initiating tonic return of the main theme. As they explain:

> [I]t is inappropriate to claim that the 'recapitulation' in a Type 2 sonata 'begins with S' …. What does begin with the arrival of the tonic-key S … is the tonal resolution, the second portion of the second rotation …. Here the primacy of the rotation principle … trumps traditional, erroneous terminology. Type 2 sonatas do not have recapitulations at all, in the strict sense of the term. Instead, their second rotations have development spaces (P–TR, or, sometimes, their episodic substitutes) grafted onto tonal resolutions (S–C). (2006, p. 354)

Reversal is in these terms illusory because the reprised material cannot serve as a self-standing rotation, but only makes sense within the larger span initiated by the development. This difficulty is exacerbated by the interaction of rhetorical and cadential-structural factors. For Hepokoski and Darcy, the critical role the second theme's structural PAC plays in defining the EST problematises any post-second-group first-theme return, because the transposition of the exposition's structural cadence (the 'essential expositional closure' or EEC) into the tonic (generating the 'essential structural closure' or ESC) necessarily positions any subsequent first-theme material outside of 'sonata space'. Consequently, there is 'no reason to include the add-on coda statement of P within sonata space' (2006, p. 383).[8] *Pace* Jackson, reversed recapitulations are thus not 'deformations' of the standard 'type 3' sonata, but a separate type possessing no recapitulatory function at all.

Hepokoski and Darcy's argument prevails for the later-eighteenth-century repertoire, and remains plausible for nineteenth-century music in which the high-classical coordination of structure and rhetoric survives broadly intact. It becomes vulnerable in situations where sonata space is not demarcated by sonata theory's EST.[9] The second rotation of a type 2 sonata is delimited by the ESC: primary material lying beyond it has to be annexed to a 'parageneric space'. But sonata forms lacking a recapitulatory B-theme PAC have no such liminality. This suggests that reversed recapitulations are possible in circumstances where the classical calibration of cadence, design and rhetoric breaks down, as is the case in a large community of nineteenth-century works in which the boundaries of sonata space are a debate that perfect cadences cannot arbitrate, and as is schematically apparent in the Finale of Bruckner's Seventh.

Table 2 illustrates the point by comparing Bruckner's Finale with a classical sonata for which the type 2 model has explanatory force, namely the first movement of Mozart's Piano Sonata, K. 311 [**insert Table 2 here**]. Mozart retrieves closing-section material in IV from bar 58 as the second phase of the development, but the ensuing retransition merges with TR material from bar 75 and moves directly to a tonic half-close medial-caesura effect at bar 78, after which the second theme enters in the tonic. The expositional order of subordinate and closing material then recurs, but the nature and location of the structural PAC is changed: bar 87 revisits the exposition's closing material after a tonic half cadence, and the ESC is displaced to the end of the C reprise at bar 99, in effect folding the expositional C into the B group. This shift of priorities creates fresh labour for the A theme, which now serves as the closing section, interpolated between the ESC and the exposition's final codetta, which comes back at bar 109.

Shared rhetorical properties notwithstanding, the distribution of cadences in Bruckner's Finale is incomprehensible in Mozartian terms. Most strikingly, the Finale contains not a single structural PAC in the tonic E major or any other key. The phrase design of the exposition A theme is delimited by IACs in A flat and B flat respectively; the B group initially passes through PACs in B flat minor and C sharp major, which function as 'cadences of limited scope' in Caplin's terms (2013, pp. 155–6), but has no terminal cadence at all, concluding over $V^{6\text{-}3}$ of A minor; and the C group finds an IAC in C major by bar 117, which is immediately questioned by subdominant-minor inflection, C eventually being confirmed by assertion over a tonic pedal from bar 133. The reprised theme groups are no less evasive: the C group from bar 191 is predominantly sequential; the B group beginning at bar 213 passes through PACs in D minor and F major in correspondence to bars 35–42, but merges with a first-theme-based transition from bar 246 without cadential preparation; and the A-theme group from bar 275 articulates a series of increasingly strenuously expressed cadences, including one evaded PAC in A flat in bars 282–283, before the climactic E major IAC announces the coda in bars 313–315.

In all, the challenge Bruckner mounts to Mozart's cadential syntax exposes the radical difference between the formal function of harmony in high-classical and post-Romantic practices. Mozart's recapitulatory rearrangement of cadential priorities accommodates the change of thematic order, but the structural force of I, V and their articulatory cadences remains undiminished. Bruckner purposely marginalises PACs, such that their axiomatic delimitation of sonata space becomes virtually meaningless. The sources of Dömpke's critique are graphically exposed: the form's rhetorical outline is clear to the point of simplicity; but classical structural markers are systematically removed, devalued or displaced.

Form, 'Orbital' Tonality and Harmonic Discontinuity

If these observations enable us to revisit Jackson's reading *pace* sonata theory, they also underscore the need to rethink Bruckner's coordination of formal function, harmony and tonal strategy. Pivotal to this objective is what Korstvedt (2001, p. 188) calls the 'dissonant tonal complex': the tonally disruptive elements that Bruckner introduces into primary material, which subsequently acquire formal significance. This habit has been recognised as structurally germinal at least since Paul Dawson-Bowling (1969); subsequent contributions include William Benjamin (1996), Julian Horton (2004, pp. 115–43) and most recently Miguel Ramirez (2009 and 2013), who tracks its application in the later symphonies, employing a mixture of neo-Riemannian and Schenkerian approaches in the process. A consensus methodology, which substantially confronts Bruckner's challenge to the principles controlling Viennese classical syntax, however remains elusive. Such a methodology would need to account not only for the formal implications of thematic chromaticism, but also for its impact upon thematic syntax. William Caplin's insistence that formal function depends upon harmonic progression remains critical for Bruckner, but the extremity of Bruckner's intra-thematic modulations dislocates the classical tonal relationship between presentation and closure, as well as the prolongational integration of the ultimate tonic and the keys premised by intra-thematic functions.[10]

As Ramirez recognises (2013, pp. 158–60), this practice demands a mixed theoretical economy. Bruckner's diatonic prolongational, cadential and sequential progressions submit to Schenkerian description where they occur; and tonally indeterminate triadic progressions can be described using neo-Riemannian transformational categories. Accounting for the sum of these parts however requires us to ramify both theoretical contexts.[11] One path towards such an account is suggested by the notion of the double-tonic concept proposed by Robert Bailey for *Tristan* (1985) and developed further by Christopher Lewis (1984, 1987 and 1996), Deborah Stein (1985), Matthew Bribitzer-Stull (2006a and b) and Matthew BaileyShea (2007). As Bailey explains:

> The new feature of *Tristan* is the pairing together of two tonalities a minor third apart in such a way as to form a 'double-tonic complex'. The pairing of A and C for the whole of Act I may well have grown out of the traditional close relationship between A minor and C major, but the double-tonic idea goes well beyond merely beginning in a minor key and concluding in its relative major …. In some ways, the new concept plays upon that very closeness, but we are now dealing with the 'chromatic' mode of A and the 'chromatic' mode of C. The two elements are linked together in such a way that either triad can serve as the local representative of the tonic complex. Within that complex itself, however, one of the two elements is at any moment in the primary position while the other remains subordinate to it. (1985, pp. 121–2)

For Bailey, *Tristan*'s harmony initiates a kind of third tonal practice, moving beyond classical monotonality and early nineteenth-century tonal pairing into an environment in which the implication of two potential modally mixed tonics is continuous, omnipresent and (in Wagner's Prelude at least) inconclusive.[12]

Bailey's idea has been applied to Bruckner by Lewis, who reads the Adagio of the Seventh Symphony as exhibiting 'a principal tonal pairing of C sharp and E enunciated in the opening four measures' (Lewis 1996, p. 124). Lewis analyses the first-theme group in terms of the interaction of three 'interwoven' tonal threads, two concerned with the close relations of C sharp and E, and a third favouring A. Unlike Bailey, Lewis explicitly relates Bruckner's technique to a concept of temporality, drawing a parallel with cinematic narrative interplay (his specific comparator is Maurizio Nichetti's *The Icicle Thief*); Lewis writes:

> My principal thesis is that temporal disruptions and displacements allow complex chromatic passages to be formed from the combination of two or more independently coherent progressions. That is precisely the case [in Bruckner's Adagio] if we allow ourselves to hear the excerpt as we see *The Icicle Thief*, through a kind of time filter exercised by the memory that instantaneously bridges the gaps. (1996, pp. 126–7)

Drawing these precedents together, I propose a concept of *orbital tonality* for Bruckner, fundamental to which is the claim that his mature music disperses the foreground across *multiple tonal orbits*. Moving beyond the monotonal notion of a unifying, hierarchically privileged key, but also noting Lewis' caution against regarding the double-tonic complex as 'bitonal' (Lewis 1987, p. 30), I re-imagine the concept of tonal pairing, by construing each orbit as a system in itself, possessing a centre and its own set of locally tonic-defining relationships. The orbital centres are not 'local representatives of the tonic complex', as Bailey understands double-tonic relations. Rather, each orbit is one entire classically diatonic tonal universe, distributed as a series of disparate fragments, between which reside other orbits, which are at once tonally disconnected but proximate by voice-leading labour.

The difference between this and a monotonal reading clarifies when we consider the role of modulation. In a monotonal context, tonicisations of B and A flat would both constitute modulations in relation to a governing E tonic; in a double orbital complex centred on E and A flat, B and E stand within the same orbit, which they both represent, whereas A flat orientates a different orbit. To modulate from E to B in this context is to change key within one system; to move from E to A flat is to move between systems. The inter-orbital relationships, although logical, are essentially disjunctive: when we shift between them, we toggle competing systems, which behave like contiguous but dissociated tonal dimensions.

The cinematic intercutting that Lewis describes is a product of this property: Bruckner holds in tension multiple versions of a tonic-orientated system, none of which is privileged. The resulting *orbital complex* is, properly speaking, not a system, but a 'hyper-system', which is the sum of participating systems.

In his later music, Bruckner favoured symmetrical triple complexes: the Seventh's Finale mobilises E, A flat and C, referencing the A flat–C–E hexatonic complex explored by Bribitzer-Stull (2006b). In the Eighth Symphony, the complex controlling the entire work comprises the semitonally adjacent orbits B, C and D flat. The preference for semitonal relations persists in the Ninth Symphony, which explores the semitonal orbits around D. At the start of the Seventh's Finale, E, A flat and C all have putative tonic status; at the end, E prevails, not as the 'true' tonic, but as the last point of orientation to be selected. The music's structural problematic arises in the refusal to arbitrate between orbits, which endangers the concept of a universal tonal premise basic to diatonic common practice and with it any possibility of hearing form in terms of classical tonal continuities.

This perception makes plain Schenkerian theory's insufficiency for this music. Even modest formal spans collapse prolongation into progression, a manoeuvre encouraging a threefold perspective: progression *within* orbits responds to conventional Roman-numeral and voice-leading analysis, appropriate to the orbit's governing tonic; progression *between* orbits benefits from description using neo-Riemannian labels for triadic quality (+ and -), transformation and set-theoretical origin (chiefly hexatonic and octatonic collections); and the connections between tonally consistent non-adjacent segments are *associative*, because the intervening music interrupts rather than reinforces prolongation.

I graph the complex by separating the foreground into three distinct layers, appropriate to the respective orbits. The local progressions comprising the complex I call the *harmonic field*, a structure defined by a connective logic interweaving prolongational, transformational and associative relationships. Within each field, the movement between orbits is explained in terms of the voice-leading labour required to bridge the gap, represented by beams, which clarify the governing inter-orbital voice leading, and by neo-Riemannian annotations, which specify the logic of progression. Some terminological aspects require clarification. Although Dominant (D), Parallel (P), Relative (R), *Leittonwechsel* (L) and their combinations are applied conventionally, I use 'S' to signify subdominant transformation, in preference to D^{-1} (after Brian Hyer) or Cohn's 'N' (*Nebenverwand*). In order to capture Bruckner's extensive use of semitonal motion, I also expand Lewin's notion of SLIDE to encompass all semitonally adjacent triads, distinguishing between four subtypes: SLIDE 1 describes (with Lewin) motion between triads sharing a common third (C+–C♯- and its inverse); SLIDE 2 describes semitonal root motion between major triads (C+–C♯+ and its inverse); SLIDE 3 describes semitonal root motion between minor triads (C-–C♯- and its

inverse); SLIDE 4 describes semitonal root motion from minor to major triads (C–C♯+ and its inverse).[13]

Because orbits share triads, the harmony sometimes references more than one orbit simultaneously, requiring representation on both relevant layers of the graph. In some instances, the context clearly favours membership of one orbit over another, in which case the less plausible affiliation is given in square brackets. Finally, the coordination of fields with intra-thematic and inter-thematic functions is explained by overlaid form-functional analysis. Inter-thematic functions are labelled A, TR, B and C respectively; sectional subdivisions within inter-thematic functions accrue integer suffixes (A1, B1 etc.); reprises are signified by superscript integer suffixes ($B1^1$ etc.); and description of intra-thematic functions adapts Caplin's terminology.[14]

The Finale's three orbits derive from the Northern hexatonic system as Cohn describes it (1996, p. 17). Figure 1 charts the movement's orbital complex, defined as the diatonic key relations for each hexatonic centre and their modally mixed partners, organised along a horizontal fifth axis in the manner of a *Tonnetz* [**insert Figure 1 here**]. The near relations of each orbit are boxed, as are the modally mixed orbital centres; the flat- and sharp-side outliers along the fifth axes are included outside the box for each orbit, supplying the missing link between orbits along the *Tonnetz*. Modal parallelism is represented by a horizontal dotted line; enharmonic equivalence is applied as necessary. The complex's symmetry means that the orbits are mediated in an ordered, circular way. Adjacent orbits share outlier triads (the 'mediating' triads described in Figure 1): the fifth-related flat-side outliers for the E orbit are the fifth-related sharp-side outliers for the C orbit; the sharp-side outliers for the E orbit are (in some cases enharmonically) the flat-side outliers for the A flat orbit; and the sharp-side outliers for the A flat orbit are the flat-side outliers for the C orbit. Triads shared between orbits are mapped in Figure 2 [**insert Figure 2 here**]. Adjacent orbits hold four triads in common, the bottom right-hand corner for each orbital box overlapping the top left-hand corner for the proximate orbit: E and C share A-, E-, C+ and G+; C and A flat share F-, C-, A flat+ and E flat+; A flat and E share C sharp-, G sharp-, E+ and B+. These various relationships play two roles: they mediate the orbits, supplying a harmonic common ground; and they engender ambiguity, because shared triads can imply more than one orbit (although the context of such triads in practice sometimes favours one orbit over another).

Example 1 graphs the exposition A-theme group in these terms, distributing the music across the three orbits (although the C orbit is putative at this stage, and is represented obliquely by the relations of G) [**insert Example 1 here**]. The group consists rhetorically of a sentential period: antecedent bars 1–10, comprising statement bars 1–2, response bars $3–4^3$, continuation bars $4^3–7$, and cadence and aftermath bars 8–10; consequent bars $11–19^1$, comprising statement bars 11–12, response bars $13–14^3$, continuation bars $14^3–16$, and

cadence bars 17–19[1], after which TR follows.[15] The music's chromaticism however disrupts this apparent conventionality by dislocating the cadence from the presentation phrase in antecedent and consequent. The progression in bars 5–7 moves between orbits by two chromatic means: the PR transformation $B+^{7}$–$D+^{4\text{-}2}$ in bars 5–6 draws on octatonic collection II; and the semitonal progression $D+^{4\text{-}2}$–E flat$+^{4\text{-}2}$ in bars 6–7 exploits SLIDE 2. After this, the music approaches the A flat orbit by reinterpreting E flat+ as $V^{4\text{-}2}$ *en route* to an imperfect authentic cadence (IAC).[16] The theme's sentential rhetoric tracks its classical forebear unproblematically; but the harmonic content opens a hexatonic gap between presentation and cadence. The antecedent's end then serves up a post-cadential hexatonic twist, pulling back from the A flat orbit to E minor in bar 10, which retroactively functions either as vi in relation to the $V^{4\text{-}2}$/G in bar 6, or as the modally mixed tonic of the E orbit. The consequent then explores sharp-side relations of E and A flat. The statement and response's B harmony supplies a dominant counterpart to the antecedent's E major presentation phrase. The continuation (bars 15–16) again facilitates motion between orbits, but modifies the chromaticism of bars 5–6: the PR transformation C sharp^{7}–E^{7} again invokes octatonicism, while remaining just within the influence of the E orbit (as V^{7}/ii–V^{7}/IV); the $E+^{7}$–$F+^{4\text{-}2}$ in bars 16–17 approaches the cadence via SLIDE 2, although the soprano and bass voice leading is disposed in contrary motion; and the cadence itself partners the antecedent's A flat IAC with a B flat IAC, which can be annexed to A flat as a sharp-side outlier, or to C as flat VII, although the former impression prevails.

These foreground harmonic properties have implications at all formal levels. The disposition of orbits within the complex is closely coordinated with the music's intra-thematic design. In both antecedent and consequent, the statement and response establish I and V of the E orbit respectively, the cadential phrases confirm I and II in the A flat orbit, and the continuation facilitates progression between the two. The function of each intra-thematic unit is consistent with classical precedent (initiation, continuation and closure), but the overarching tonal relations they support are not. The group's inter-thematic function is thus not to present a theme articulating a single tonic, but to establish a harmonic field, comprising a multi-orbital complex, which will stand for the A theme's function as the form unfolds. The fact that, on the largest scale, this field is orientated around the hexatonic progression E+–A flat+ means that the group's basic tonal function is not monotonal, but chromatically 'duo-tonal', insinuating two possible tonics without privilege.

Typically for Bruckner, this A-theme complex is formally generative on the largest scale: the tonal conflict thus engendered is exploited as the form's generative principle. Because this is embedded within the A theme, subsequent expositional inter-thematic functions do not establish and confirm a tonal opposition in the classical sense; instead, they present fields, which navigate the orbital complex in novel ways. Thus the B theme entering

at bar 35 does not establish a new tonality, but contrastingly traverses the orbital system established by the A theme, by exploiting enharmonicism and modal mixture as navigational principles. Example 2 graphs the group, spanning bars 35–92 [**insert Example 2 here**]. Once more, the theme's design is recognisably a small ternary form, comprising B1 in bars 35–50, a contrasting middle (B2) in bars 51–65 and $B1^{1}$ in bars 66–92. The opening statement and response re-orientates the orbital system around A flat, while also negotiating an enharmonic seam centred on D flat/C sharp, which pulls the music between the E and A flat orbits. The response trades the A flat orbit for V/E via a SLIDE 4 progression (B flat-–B+), but the cadential momentum towards C sharp major in bars 41–42 covertly returns to A flat via its enharmonic subdominant. Bars 43–50 deploy a similar enharmonic conceit from a different direction, passing into the E orbit via the PR transformation C sharp+–$E+^{6\text{-}3}$ in bars 44–45 and abruptly back to V/A flat via the B+–B flat+ SLIDE 2 in bars 46–47, before finding a half close in G flat (enharmonic II of the E orbit or flat-VII of A flat) in bars 49–50.

The B2 section turns instead to modal mixture, pivoting around the underlying common-tone pedal C. It initially favours F major, and as such suggests motion towards the C polarity (the G implied in the A group as a potential V is now partnered with F as a putative IV), but from bar 60 this is converted via modal mixture into vi of A flat. $B1^{1}$ is ushered in by the hexatonic transformation PL, and departs from B1's model from bar 74, deploying the LP transformation C sharp+–F+ in order to arrive at the A flat orbit's dominant, enharmonically reinterpreting C sharp as IV/A flat along the way, before E is recovered in bar 80 and the music descends sequentially towards $V^{6\text{-}5}$/A minor at bar 89 in preparation for the C group. The sequence here exploits an irregular succession of major- and minor-third transformations in order to traverse all three orbits: bars 80–84 explore elements of the E orbit; bars 85–86 pass momentarily through A flat via an enharmonic seam and a PL transformation; and bars 87–92 return immediately to the E orbit on the way to C's relative minor.

Example 3 summarises the C group [**insert Example 3 here**], which comprises a single expanded sentence (statement and response bars 93–100; continuation 101–115; cadence 115–116) extended with a two-part codetta (116–128; 129–144). Overall, the field is circumscribed by the C orbit, tracing a path from A minor to C major. Again, there is close coordination between the field and the intra-thematic design. The statement and response juxtapose the C and A flat orbits, connected in bar 97 by reinterpretation of ^4 of C as ^5 of B flat minor. The continuation then shifts to the E orbit, moving tritonally (and therefore octatonically) through RPR between B flat- at the end of the two-bar model and E+ at the start of its sequence in bar 103. The fragmentation process in bars 105–108 mobilises a linear intervallic pattern that returns the music to the C orbit, arriving at its D+ outlier in bar 109; but Bruckner then exploits a SLIDE 2 progression that tilts immediately into the A flat orbit, which orientation is sustained until bar 114, where the PR transformation A $flat+^{7}$–$B+^{4\text{-}2}$

insinuates E major (although note the enharmonic spelling of the upper voices). The C orbit is then recovered via the $B+^{4\text{-}2}$–$C+^{4\text{-}3}$ SLIDE 2, clearing the way for the rather provisional C: IAC in bars 116–117, and C is prolonged in bars 117–144 despite the intrusions of F minor and D flat.

The choice of C as the exposition's goal tonality clinches the overarching hexatonic scheme identified by Jackson, appraised in Example 4 [**insert Example 4 here**]: we now see that the orbital system sketched in the A-theme group expands across the exposition as the hexatonic co-cycle E+–A flat+–C+. Each theme group employs a different orbit as its point of orientation; this eventually produces the complete ascending augmented triad. The third group rejects the precedent established in A and B by approaching its orbital centre obliquely via a near relation within the same orbit (A-). Unlike the E and A flat orbits, the C orbit is emergent across the exposition as a local *telos*, a process that engenders persistent ambiguity: C's dominant is implied in the A theme; its subdominant emerges in the B group; and its relative minor initiates the C group.

This analysis suggests a strategic rationale for the recapitulation's reversal of thematic order: its purpose is not to subordinate tonal conflict to tonic prolongation in the classical sense, but to reconfigure the fields representing each theme, such that the route through the orbital complex eventually makes the A theme synonymous with both the assertion and cadential tonicisation of E major. Examples 5 and 6 summarise this process, beginning with the return of theme C at bar 191 [**insert examples 5 and 6 here**].

Critically, neither the C nor the B group has form-functional integrity: the C group has no cadential terminus, concluding instead with a transposition of its statement culminating in bars 211–212 on an arpeggiated diminished seventh; and the B group disintegrates in its contrasting middle, fusing at bar 247 with a transition, which clears the way for the A-theme return at bar 275. This formal provisionality is reflected in the tonal strategy, which in outline and harmonic detail successively loosens the A flat and C orbits' claims to tonal primacy. The C theme's sentential design is broadly recovered, but the music establishes no tonal centre, beginning in B minor and passing vertiginously through the three orbits before arriving at its goal diminished seventh: PR flips the music from A to F minor for the response in bar 195; a SLIDE 2 progression sets up A minor for the continuation, which ascends by conjunct sequence until it attains the E orbit via C sharp minor in bar 203; and the D minor restatement at bar 209 starkly reasserts the C orbit following an LP transformation. The B group initially takes C major as its point of orientation, thereby recovering B1's expositional field structure in transposition, but B2's E pedal supports a precipitous fragmentation process, which spans a PL shift to the C orbit at bar 241. The group's elision with TR is enabled by a rapid plunge through the three orbits: C+ transforms into E flat+ via PR, which immediately yields to A+ via RPR.

The A-group recapitulation, graphed in Example 6, is in contrast the only inter-thematic function in the movement to be initiated and closed in the same key, which moreover is cadentially secured. This security is however hard-won. The A theme's sentential antecedent in bars 275–283 leads not to a consequent, but to a phrase extension made possible by appending an expansion of the continuation and cadence, which in turn initiates a fresh antecedent, beginning in G major at bar 291, paired with its own even more comprehensively enlarged consequent from bar 299, including a ten-bar protraction of the continuation into two sequential units, bars 304–307 and 308–312. These expansions rely on the increasingly profligate use of the transformations engendered in the continuation phrase, a tactic culminating in bars 303–312, where the tonally bewildering progression G sharp+(LP)C+(SPS)F-(L)D flat+(SLIDE 2)D+(SLIDE 2)+E flat+(2S)C sharp+(PR)E+(LP)G sharp+ ascends kaleidoscopically through elements of all three orbits, before attaining V/vi in E in oblique preparation for the structural E:IAC in bars 313–315.

Example 7 summarises the movement's tonal scheme [**insert Example 7 here**]. Jackson's observation that bar 191 devalues B as a structural dominant is borne out, but his interpretation of B as a passing note between A and C acquires fresh complexity. The conjunct bass motion conceals the fact that B minor intrudes from the E orbit (without it, A minor and C major would together confirm the C orbit established at the exposition's end), but B minor's presence emphasises A minor's potential dual identity, as vi/C and iv/E. On the largest scale, the bass progression clarifies two overarching strategies. First, the Northern hexatonic system comprehensively displaces the diatonic relations of E in the deep structure: the exposition's E–A flat–C motion is recovered with the B recapitulation and allowed to proceed to E at the A theme's return, thereby completing the hexatonic arpeggiation. Secondly, this privileging of hexatonic progression deprives V/E of its deep-structural force. Rather, the dominant is confined to the E orbit, and is allowed to participate structurally only at the end of the A recapitulation, in an inter-thematic E major cadence, which has thus far been assiduously withheld. In this way, Bruckner labours to establish a tonal premise at the end of his sonata form – the synonymy of A theme and tonicisation of the ultimate key – which classical tonality would assert in the first-theme exposition as a structural given.

The Reversed Recapitulation Revisited: Functional Transformation and Stratification

Bringing the strategic interaction of harmony, tonality and form pursued here into contact with broader perspectives on Romantic and post-Romantic form facilitates higher-level assertions about Bruckner's formal habits, which allow us, in turn, to revive the idea of recapitulatory reversal and bring it into constructive dialogue with a type 2 reading. Two ideas are useful in this regard: the dialectical concept of 'becoming' advocated by Janet

Schmalfeldt (2011); and stratification, understood in the terms defined by Edward T. Cone (1962) and recently revived in a Schubertian context by Anne Hyland (2014 and 2016).

One problem for Jackson's analysis is the eventual tonic's persisting insecurity: E major has scant presence in the tonal discourse before the A theme returns at bar 275. Taken together with the reprised B and C groups' harmonic instability, this begs the question: how do we know that bars 191–274 are not part of the development? The fact that the reprised C and B both eschew the E orbit is problematic both for the type 2 reading, because the subordinate theme does not initiate tonal resolution, and for the reversed type 3 reading, because we have to take on trust that B and C can be recapitulated in reverse without stabilising the E orbit. On the other hand, Simpson's recourse to content-based form seems like an admission of defeat. The music's rhetoric is strong enough to sustain the sonata analogy, even if a classical tonal plot and cadential trajectory are absent.

'Becoming' offers one way out of this impasse. Schmalfeldt explains this as 'the special case whereby the formal function initially suggested by a musical idea, phrase or section invites retrospective reinterpretation within the larger formal context' (2011, p. 9), and designates its presence with the symbol '⇒'. The idea has since been finessed by Nathan Martin and Steven Vande Moortele, who explore the possibility that in some situations 'the initial function is not superseded by the later one, but remains in force until the very end of the unit'. In this case, the music does not trade one function for another, but holds two functions in tension, such that 'the entire unit has a double function' (2014, pp. 147–9). Extending Schmalfeldt's nomenclature, Martin and Vande Moortele employ the double-headed arrow '⇔' to signify this condition. Its effect is a temporary suspension of Schmalfeldt's dialectical process; instead, the music 'bounces back and forth between conflicting form-functional profiles', such that 'form-functional time' is suspended (2014, p. 148). I define this practice as 'functional transformation' – the situation in which material exchanges its functional identity within an encompassing formal span – a definition embracing both Schmalfeldt's and Martin and Vande Moortele's conceptions, since transformation may act in both a linear and a circular way: as a teleological process, or a self-perpetuating conflict.[17]

Something like the latter condition obtains from bar 191 of Bruckner's Finale: the recapitulatory process begins before the developmental process has completed; and arguably, the resulting dichotomy between stabilisation and intensification is never resolved within conventional sonata space. This claim needs to be parsed parametrically, because our sense of form-functional orientation depends on which parameter holds our attention. The result is a parametric non-congruence of epic proportions (Smith 2005, and also Webster 1991 and 2009, especially pp. 128–39), explained in Table 3 [**insert Table 3 here**], which trades off

features of the reversed type 3 and type 2 paradigms. If rhetoric and inter-thematic function are privileged, then the recapitulation properly begins with the return of C, and (productively distorting the sonata-theoretical term) everything as far as the coda has to be heard as a reversed rotation. This impression is reinforced by the topical discourse. The A theme's *buffa* march and the B theme's chorale establish a neat expositional opposition of the secular and the sacred, which is then problematised by the C group's re-conception of the *buffa* theme as an archaic, neo-baroque French-overture topic. By running this process in reverse, the recapitulation undoes the exposition's encroaching topical archaism, making the form's final stages synonymous with the A-theme topic.

If we focus on intra-thematic design, motivic and tonal process, however, then the opposite perspective takes precedence. None of the material between the start of the development and the coda has unequivocal presentational stability: the recapitulated B and C groups lose form-functional integrity as they proceed. This is rectified in the A-theme return, but with considerable effort: the harmonic structure that produces the grand culminatory IAC in bars 313–315 is the outcome of a substantial process of phrase expansion, traced in Example 6 above.[18] The strategies that obscure the recapitulation's formal function also promote its developmental character: the destabilisation of the B and C groups is a consequence of sequential variation and fragmentation. The provision of the A-theme group with an E-major cadence is contrastingly facilitated by phrase extension and expansion, but the net result is nonetheless developmental, because Bruckner exploits the theme's capacity for sequence and imitation. In a sense, the developmental processes acting on the exposition material continue uninhibited until E major is secured in bars 313–315, promoting the impression of a type 2 sonata in which tonal resolution is only attained as the coda approaches. This developmental impulse articulates the tonal strategy. The 'tragic' negation of dominant function that Jackson posits for the start of the C-group reprise undermines a sense of tonal recapitulation, which is only recovered with the A theme's tonic return at bar 275. The effort required before the A-theme group can cadence in E palpably expresses the tension between an inter-thematic rhetoric, which schematically imposes a recapitulatory function, and a tonal process, which resists it until the very last minute.

In sum, the formulation 'development⇔recapitulation' is a product of parametric counterpoint, and could be refined as 'development (intra-thematic function; motive; tonal strategy)⇔recapitulation (rhetoric; inter-thematic function)': the shuttling between antithetical functions that Martin and Vande Moortele describe in Schubert's String Quintet here depends upon whether our interpretation of large-scale function derives from the association of rhetoric and inter-thematic grouping (in which case we sense a reversed recapitulation) or from a perception of motivic process, intra-thematic organisation and tonal

strategy (in which case we sense ongoing development). Tonality is the ultimate means by which this dichotomy is arbitrated: we await an E major cadence, which will finally confirm the presence of a tonally integrated inter-thematic function – that is, a theme group circumscribed by the same tonal orbit.

The sharp inter-thematic profiling that reinforces recapitulatory rhetoric supplies the *prima facie* evidence for the illogicality of Bruckner's style in the secondary literature. An attempt to explain this feature is central to Korstvedt's notion of schematic design: motivic development happens within theme groups, rather than as a technique that overrides inter-thematic functions in Brahms' manner, with the result that themes appear self-contained and motivically discontinuous. Viewed another way, this property evidences the relationship with Schubert stressed by Paul Bekker (1922): the organisation of sonata form as episodic, lyrical or paratactic, rather than as a dramatic, hypotactic Beethovenian principle resonates strongly with Schubertian habits noted in literature from Adorno (1928, trans. 2005) to Scott Burnham (2005) and Su-Yin Mak (2006).

Anne Hyland has recently connected Schubert's paratactic forms to the concept of stratification developed by Edward Cone for Stravinsky, applying Cone's threefold model of stratification, interlock and synthesis to the first movement of the Quartet D. 804:

> The applicability of Cone's conceptualization of Stravinsky's music to Schubert's practice in this movement … is remarkable. Cone set out to question the opinion that accused Stravinsky of 'artistic inconstancy', and specifically to understand the propensity of Stravinsky's textures to be 'subject to sudden breaks affecting almost every musical dimension: instrumental and registral, rhythmic and dynamic, harmonic and modal, linear and motivic'. (Hyland 2014, p. 33, citing Cone 1962, p. 18)[19]

This description has evident Brucknerian relevance. In the Finale's exposition, the theme groups behave as strata in Cone's sense: as discrete material units, separated by rifts in the harmonic and motivic fabric. Bruckner's objective is not to link adjacent strata with overarching developmental threads, but to employ the suspension and replacement of such threads as a means of formal articulation. As Figure 3 explains, the introduction and resumption of strata is always coordinated with inter-thematic functions and characteristic shifts of topical discourse [**insert Figure 3 here**], generating two parallel narratives. On the one hand, the A theme's developmental capacity is increasingly emphasised. The development core's focus on A brings it into direct contact with the C-theme reprise that follows, thereby establishing a material adjacency that is absent in the exposition. On the other hand, the B theme is isolated from this narrative. Its topical and expressive distance from C gains emphasis in bars 212–213, and the elision of B and TR from bar 247 simply

overwrites B with A, rather than initiating any kind of motivic integration. At the end, there is no synthesis of strata in Cone's terms, but rather an accommodation of A and C at B's expense, which then simply recedes from the discourse.

Comparison of Table 3 and Figure 3 clarifies that the processes conveyed by the strata are not allied unproblematically to any one side of the dualism of development and recapitulation functions, but rather shifts allegiances across the dichotomy. The articulation of topical discourse relies heavily on the textural disjunctions that delimit strata, and this bolsters the reversed-recapitulatory reading. Yet the evolving material relationships between strata undermine the recapitulatory integrity of the three groups, by drawing C into A's motivic proximity, a process lending additional impetus to the tonal strategy's teleological thrust, which establishes A's return as both a thematic and tonal goal.

The multi-dimensional complexity of Bruckner's formal concept is here displayed to full effect. It requires us not only to grasp the dichotomous processes at work in non-congruent parameters, but also their dispersal across three disjunct strata, which comprise the form's gestural shell. It is this property above all that embodies the movement's novelty, rather than its distance from the false friend of sonata form, as Simpson avers. There is no unitary linear narrative, as we might expect in (for example) a middle-period Beethoven symphony. Instead, Bruckner offers a strikingly postmodern vision of symphonic sonata form, the currency of which is non-linearity, fragmentation and the frustration of synthetic aspiration.

Conclusions: Bruckner and the Critique of Theory

In a penetrating analysis of *fin-de-siècle* Viennese Bruckner criticism, Benjamin Korstvedt carefully re-contextualises the claims of irrationality evidenced in Dömpke's review, exposing the discursive extremism into which liberal journalism often lapsed as a response to cultural anxieties compelling a kind of Freudian 'narcissism of small differences', and reframing the distinction between Brahmsian and Brucknerian musical logic in terms of the secular and sacred ends to which they worked, rather than the means they employed (Korstvedt 2010).

In a sense, I have sought a music-theoretical correlative of Korstvedt's argument, by construing the trope of illogicality as the locus of a fundamental problem for *Formenlehre*, and developing a theoretical framework, by means of which the lingering 'presumptions' Korstvedt identifies might be analytically scrutinised. This approach clarifies the unique extent to which Bruckner's music unmasks music-theoretical lacunae. The Finale's challenge to the type 2 sonata is a case in point, exposing key questions of how theory should evaluate the nineteenth-century persistence of classical principles relative to innovations in syntax and system. The EST, for example, does not survive very far beyond Beethoven as an uncontested

structural framework, because the principles controlling Romantic music's intra-thematic syntax devalue many self-evident late-eighteenth-century cadential protocols. With this high-classical framework, however, goes its delimitation of sonata space, since cadence no longer serves unequivocally as the arbiter of inter-thematic closure. This places an additional burden on rotation as the factor distinguishing the type 2 sonata: the impossibility of the reversed recapitulation is now determined solely on the grounds that the post-expositional material cannot support two rotations. The classical veracity of this observation depends on two factors – the weakened sense of 're-launch' when B precedes A, and the absorption of the music from the development's start up to the ESC into a single structural span – neither of which obtains unproblematically in the Finale of Bruckner's Seventh.

The synthesis of tonal and formal theory I have sketched also offers a means of dispersing the fog of criticism that still clings to Bruckner's disjunctive style. Since World War II at least, the counter-claim that hostility to Bruckner in his lifetime was solely a product of cultural politics has become a musicological commonplace, commensurate with efforts to airlift Bruckner *ex post facto* out of the *fin-de-siècle* Viennese critical warzone. To dismiss contemporaneous antagonism as no more than propaganda is, however, to neglect the problematic relationship between criticism and music theory's capacity to conceptualise orthodoxy at any one time. Dömpke's, Kalbeck's and Hanslick's criticisms are underpinned by a model of symphonic normality, into which Bruckner does not easily fit; the contemporaneous efforts of apologists to mobilise programmatic or Wagnerian explanations only reinforced the absence of an available version of symphonic practice that could accommodate Bruckner and Brahms without contradiction.[20]

These issues persist in the late twentieth and early twenty-first centuries despite critical revisionism, because we have no theory of Romantic or Post-Romantic form, aligned with a theory of tonality, which is flexible enough to engage the full diversity of practice, without falling back on repertoire-specific (predominantly Brahmsian or Beethovenian) notions of formal integrity. Yet none of the habits evident in the Seventh's Finale are unique to Bruckner. Multiple orbital complexes; functional transformation; hexatonic tonal schemes; deferred cadential resolution; tonal teleology; parataxis; stratification; narrative discontinuity: these properties suggest membership of a community of practice variously encompassing Beethoven, Schubert, Mendelssohn, Schumann, Liszt, Wagner, Franck, Brahms, Tchaikovsky, Dvořák, Mahler and many others. To be sure, the particularities of Bruckner's style demand more specific orientation within this community, and their affiliation changes depending on which technique we foreground. Whereas stratification and parataxis cleave to the Schubertian lyric-epic genealogy, the system of orbital key relations is Wagnerian, to the extent that the technique owes a debt to the idiom of *Tristan*. Its symphonic deployment provides some of the strongest evidence for Bruckner's classification as a Wagnerian

symphonist. And the idea of tonal pairing as a structural principle inherent in a movement's main theme has precedents tracking back to Beethoven, for instance the piano sonatas opp. 31, No. 1 and 53, the first movements of which collapse tonic-dominant polarisation into the main theme, and the first movements of the Sonata Op. 57 and the quartets Op. 59, No. 2 and Op. 95, all of which open with a generative semitonal conflict.

Bruckner's music is, in sum, instructive not only because of its structural riches, but because it forces us to confront and challenge the historical assumptions underpinning theoretical attitudes, and especially the way in which repertorial orthodoxies are constructed and sustained in different historical phases. The recent analytical reception of late-eighteenth-century instrumental forms is a story of the exemplification of a theoretical core, howsoever defined (form-functional theory, sonata theory, schema theory, and so forth). But the analytical reception of post-Beethovenian sonata-type music is still a story of exceptions: of composer-specific practices, which are unearthed and explained piecemeal, or as deviations from classical convention. The truth, however, may be that composers from Beethoven to Mahler partook of a shared if evolving formal syntax, which Bruckner's forms reflect, but which music theory as yet imperfectly grasps.[21]

NOTES

1 The reviews of Hanslick and Kalbeck are comparably abrasive. See for instance Hanslick (1886), and Kalbeck (1886), quoted in Göllerich/Auer (1974), vol. 4/2, pp. 436 and 169–74 respectively, trans. in Howie (2002), pp. 507 and 509–12. This mixed reception was interestingly turned to Bruckner's advantage by his publisher Albert Gutmann, who on 1st April 1886 published an advert for the work in the *Neue freie Presse*, which included both positive and negative responses. On which subject, see Korstvedt 2010, pp. 156–9.

2 The focus of pre-war commentary on Bruckner as absolute musician provoked a reaction after the War, notably by Constantin Floros: see for instance *Anton Bruckner: Persönlichkeit und Werk* (Hamburg: Europäische Verlagsanstalt, 2004) and also *Bruckner und Brahms: Studien zur musikalischen Exegetik* (Wiesbaden: Breitkopf und Härtel, 1980). Kurth's ideas have since been taken up in Parkany (1988).

3 As Kurth writes: 'Although thematic content, arrangement, construction [and] outline cannot be ignored in Bruckner's formal principle, we cannot gain an understanding of [it] by pointing to an actual theme …, but rather by illustrating how basic symphonic motions appear in developmental waves, as energetic events, in light of which themes and, likewise, the further expansion up through the formal design as a whole first become understandable'. See Kurth 1925, p. 279, trans. Lee Rothfarb in Kurth 1991, pp. 151–2.

4 For contrasting perspectives on the Romantic fragment, see Daverio (1993), pp. 49–88 and Perrey (2002). Dorothea Redepenning (2005, pp. 46–7) formulates Bruckner's discontinuities as a dialectic, in which the artistic idea conflicts with established notions of compositional artifice: 'the undoubted partaking of Bruckner's symphonies in the concept of the artwork in the emphatic sense is contrary to their equally unquestionable indifference to procedures, which converge in two aesthetic principles of Austrian-German composition – that art should be concealed, and that nothing should be random and superfluous'. ['Die unzweifelhaften Teilhabe von Bruckners Symphonien am Konzept des Kunstwerks im emphatischen Sinnesteht ihre ebenso unzweifelhafte Gleichgültigkeit gegenüber Verfahren entgegen, die in zwei äesthetischen Grundprinzipien österreichisch-deutschen Komponierens zusammenlaufen – dem, die Kunst zu verbergen, und dem, nichts Zufälliges und Überflüssiges zuzulassen'.]

5 The 'finale problem' furnished a central category for Paul Bekker, who regarded Bruckner's finales as imperfect Mahlerian precursors, locating both in relation to an Austrian lineage extending back to Schubert: see Bekker 1921 and 1922, pp. 49–56.

6 Kalbeck's aversion to the Seventh's '[e]mpty chromatic scales, dry sequences and cruel harmonic jokes which make one's hair stand on end' makes the point even more bluntly: see Howie 2002, p. 511. Schenker voiced similar critical objections: see for example 1987, p. 99. Simpson's view that the Finale is driven by 'the idea of major mediant connections between

keys, and the attempts of two competitors to oust the rightful tonic' (1992, p. 186) makes the point more optimistically: the form's essence is tonal and harmonic, not conformational (in the sense that it references a generic formal norm) or generative (in the sense that it grows from a developmental thematic concept). This is an important observation, and will be elaborated below.

7 Other examples cited by Jackson include Beethoven's Op. 59, No. 3, Schubert's *Quartettsatz*, Cherubini's *Médée*, Berlioz's *Symphonie fantastique*, Liszt's *Les Préludes*, Tchaikovsky's 'Tempest' Overture and Fourth Symphony, Brahms's 'Tragic' Overture, Mahler's Sixth Symphony and Sibelius's Fourth Symphony.

8 Hepokoski and Darcy's view is preempted in Wolf (1981), pp. 155–6.

9 Useful critiques of the type 2 sonata's Romantic applicability be found in Wingfield 2008, p. 160, and Vande Moortele 2017, pp. 236–40, who argues, via consideration of Marx's *Formenlehre*, that nineteenth-century composers had no perception of type 2 as a distinct precursor.

10 Caplin foregrounds the close association between harmony and form as a novel feature of his theory: 'In my theory, local harmonic progression is held to be the most important factor in expressing formal functions in themes …. This detailed study of the ways in which surface harmonies and their progressions relate to form distinguishes my approach from virtually all previous theories' (1998, p. 4).

11 For a recent consideration of the compatibility of Schenkerian and neo-Reimannian theories, see Rings 2011, p. 38, which allows for 'their dialogic coexistence in analytical practice'. Another important thread of theoretical research into Bruckner's harmony seeks to understand it in terms of the fundamental-bass theory he inherited from Simon Sechter; see in particular Stocken 2009. I recognise the possibility that Bruckner's chromatic harmony can be described through the detection of apparent or intermediate fundamentals after Sechter's model, but question whether such analysis can help to resolve formal, form-functional or tonal-strategic problems.

12 Historical division of tonality by practice has encouraged diverse interpretations. Bailey's analysis of *Tristan* draws an implicit line between it and earlier directed schemes, including those by Wagner himself. The notion of a second practice endorsed in Kinderman and Krebs (1996) however contrasts eighteenth-century common practice with a system encompassing directional tonality and the double-tonic idea. Richard Cohn's differentiation of the triad's two 'natures' (2012) contrastingly locates the historical division along a fault line between diatonic-triadic and chromatic-triadic practices. This historicising tendency is at least as old as Fétis's famous division of music history into four 'orders': the 'unitonique', which describes Renaissance harmony that cannot project structural modulation; the 'transitonique', which originates with Monteverdi and opens up the possibility of diatonic modulation; the

'pluritonique', which originates in the mid-eighteenth century and annexes modal mixture; and the 'omnitonique', in which chromatic substitution facilitates the full gamut of chromatic modulations, ushering in what Fétis called 'the last period of the art, with respect to harmony'. See Fétis (2008), pp. 149–94, this quotation p. 186, and also Cohn (2012), pp. 9–10.

13 These labels are (mostly) in general circulation, but I think particularly of Lewin (2007) and Hyer (1995). In brief: P describes modal parallelism; R describes relative transformations; L signifies leading-note change; D and S describe dominant and subdominant shifts. I use S to describe subdominant transformation in preference to Hyer's D^{-1} or Cohn's N or *Nebenverwandt*. My usage of SLIDE expands Lewin's definition as 'an operation … that preserves the third of a triad while changing its mode' (2007, p. 178). The octatonic sources for R, PR, RP and their multiple use and the hexatonic sources for L, PL, LP and their multiple use are explained on the graphs, referencing Van den Toorn (1983 and 1987) and Cohn (1996 and 2012) respectively. For an application of a similar graphic method to an early twentieth-century repertoire, see Clarke (2014).

14 These conventions follow Horton (2016) and subsequently Hyland (2016).

15 On the classical antecedent+continuation hybrid, or hybrid 1, see Caplin 1998, pp. 59–60; on the sentential period, see ibid., p. 65.

16 My description of cadences broadly follows Caplin (1998, pp. 27–8 and 2004).

17 For a use of this term in a different generic contexts, see Horton 2016.

18 My use of the terms extension and expansion follows Caplin 1998, p. 20. For a study of expansion techniques in nineteenth-century music under the general concept of 'proliferation', see Horton 2016.

19 For a stratified reading of the Finale of Bruckner's Fifth Symphony, see Horton 2014, pp. 111–43.

20 Comparative studies of Bruckner and Brahms remain uncommon. See as exceptions Korte (1963), Gülke (1989), Floros (1980) and Horton (2014). The most well-known example of Bruckner's students' attempts to explain his music to the public programmatically is Josef Schalk's programme for the Viennese premiere of the Eighth Symphony, on which subject see Korstvedt 2010, pp. 49–51.

21 The call for such a theory has gathered force in recent years, stimulated in no small measure by Schmalfeldt 2011: see for example Horton 2011 and 2016, and Vande Moortele 2013. Fledgling examples of such a theory can be seen in Vande Moortele 2017, and Horton 2017.

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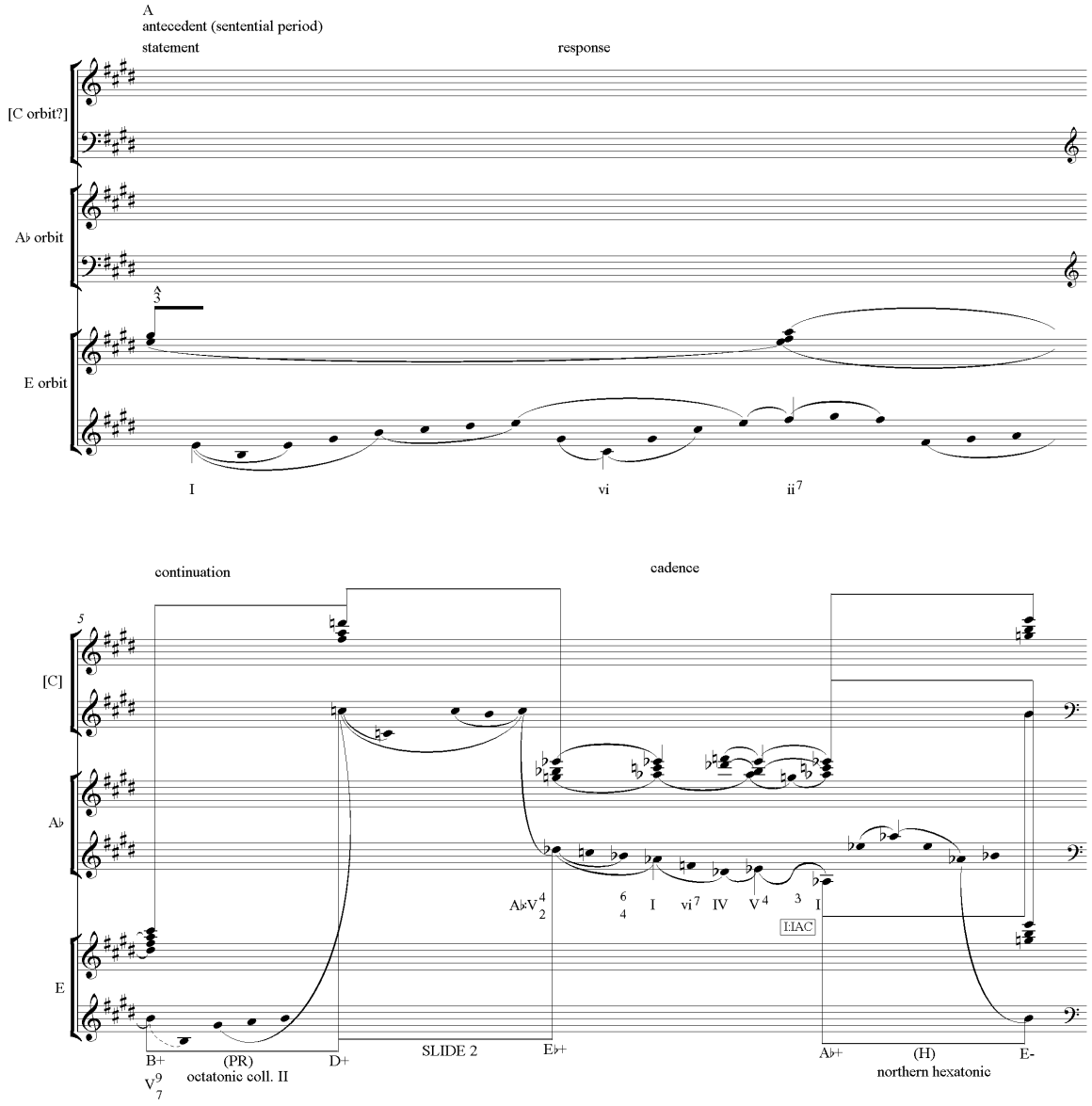
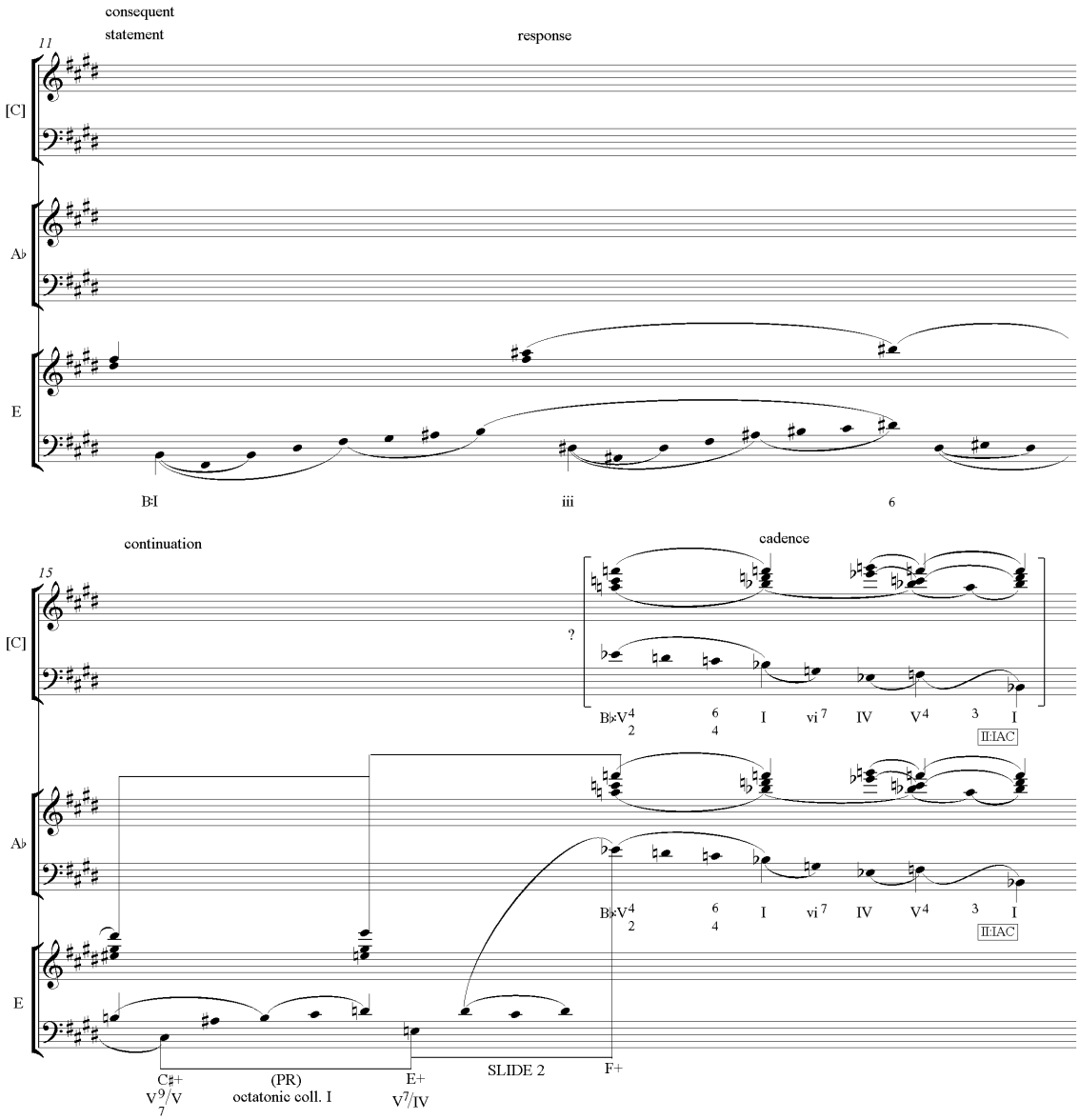
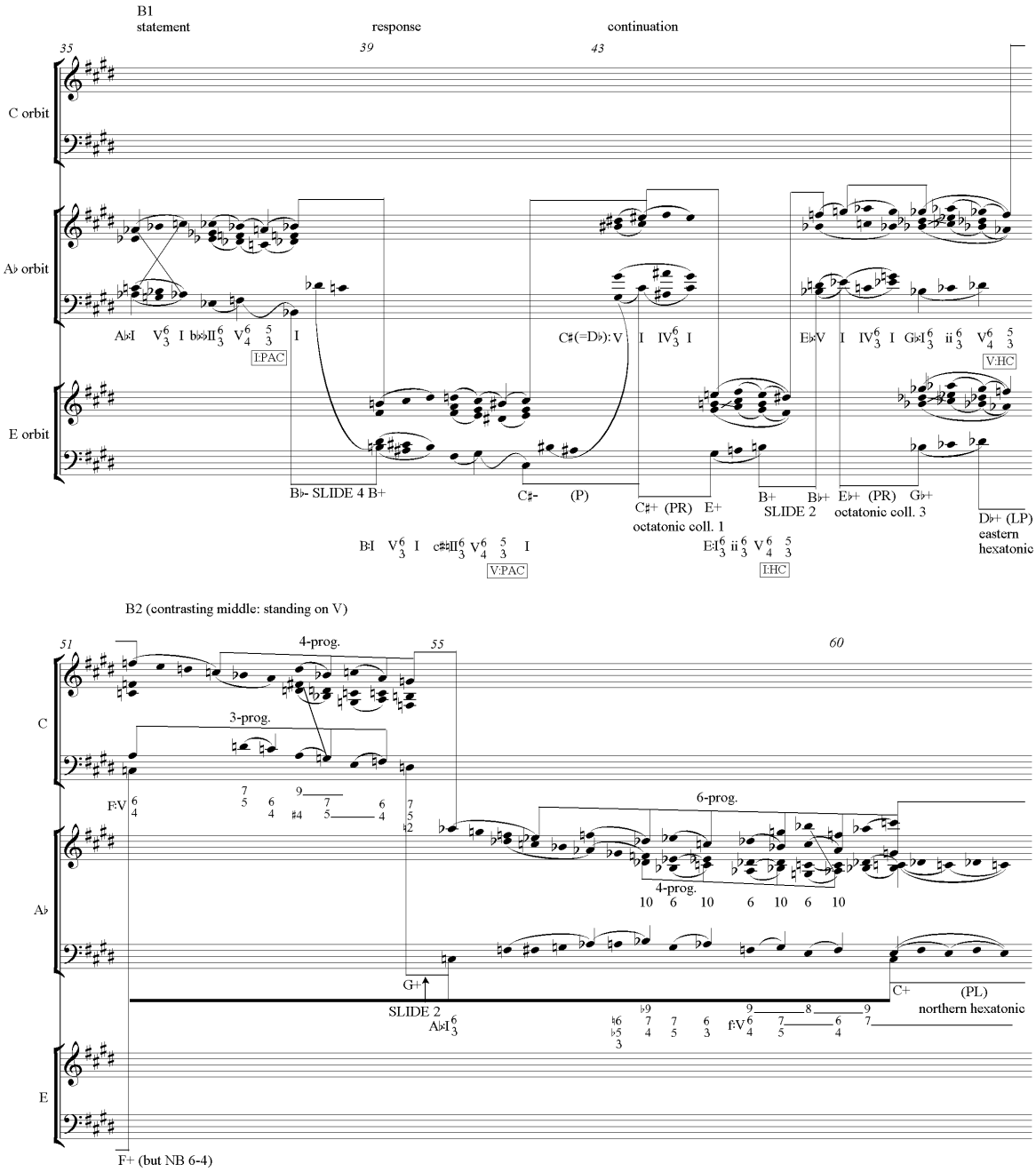
Examples

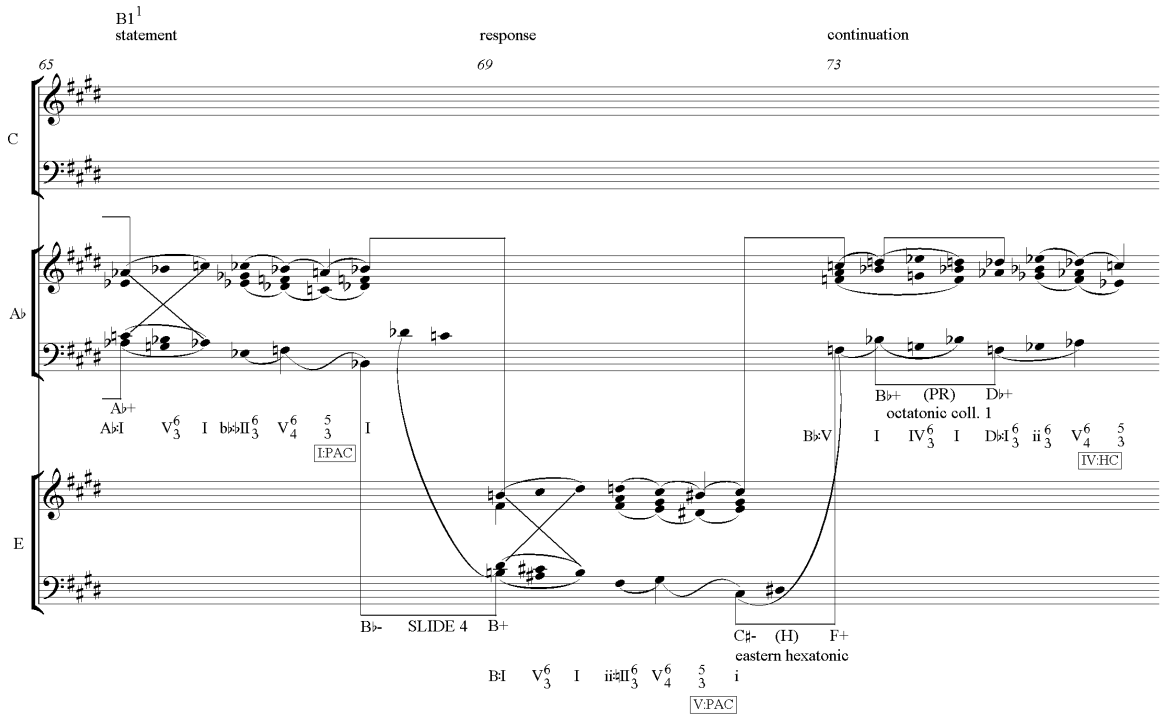
Example 1
Bruckner, Symphony No. 7, Finale, exposition A group

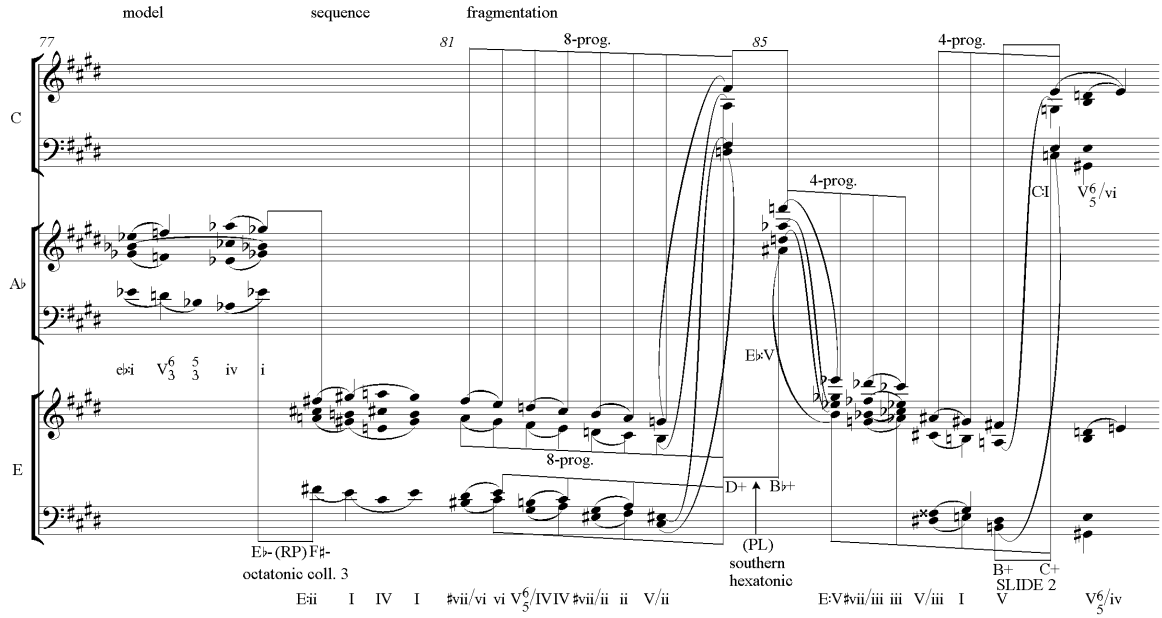



consequent
statement
response
11
[C]
A♭
E
B:I
iii
6
continuation
cadence
15
?
B♭:V4 2
6 4
I
vi 7
IV
V4
3
I
I:IAC
C♯+ V9/V 7
(PR) octatonic coll. I
E+ V7/IV
SLIDE 2
F+

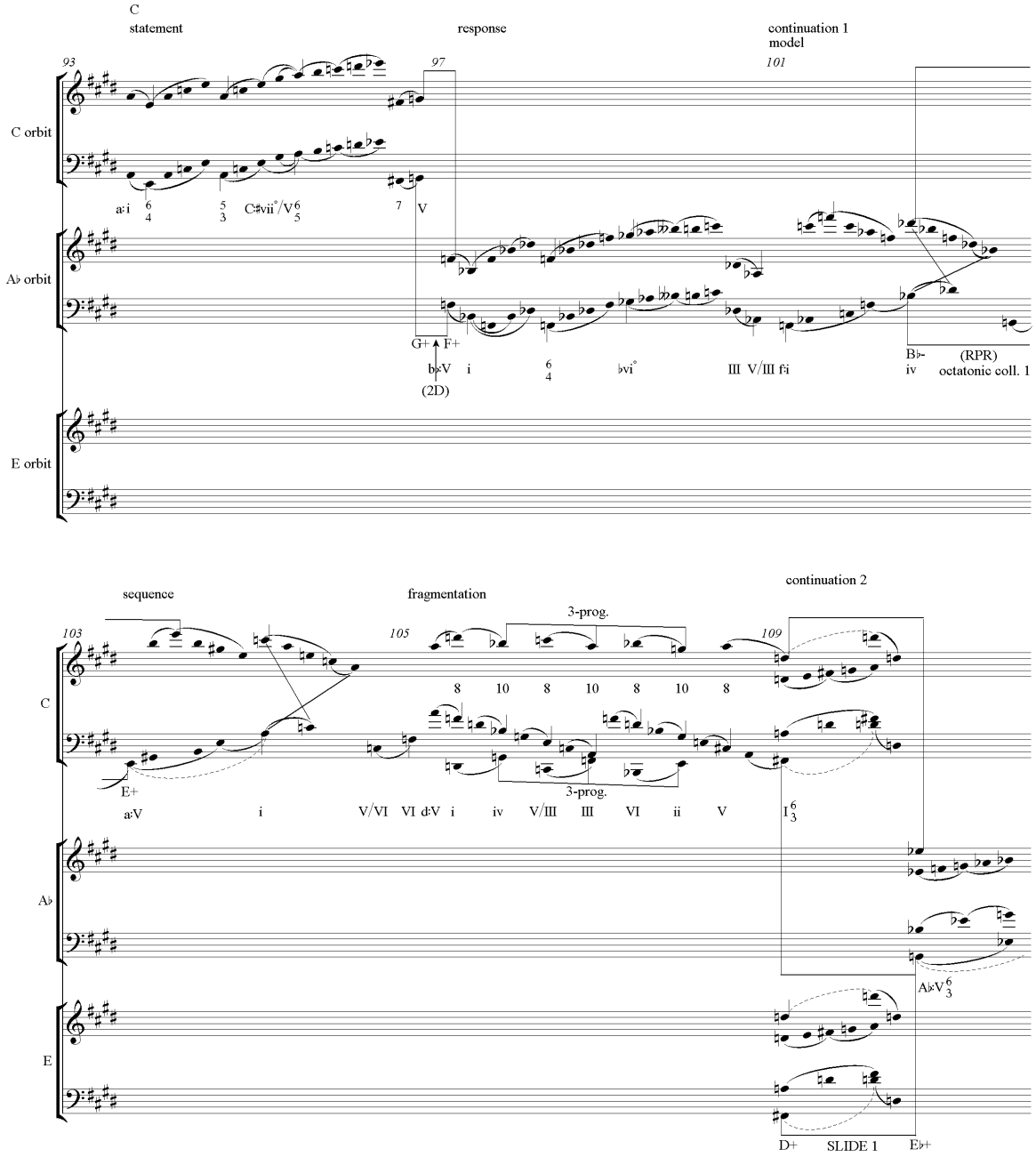
Example 2
Bruckner, Symphony No. 7, Finale, exposition B group

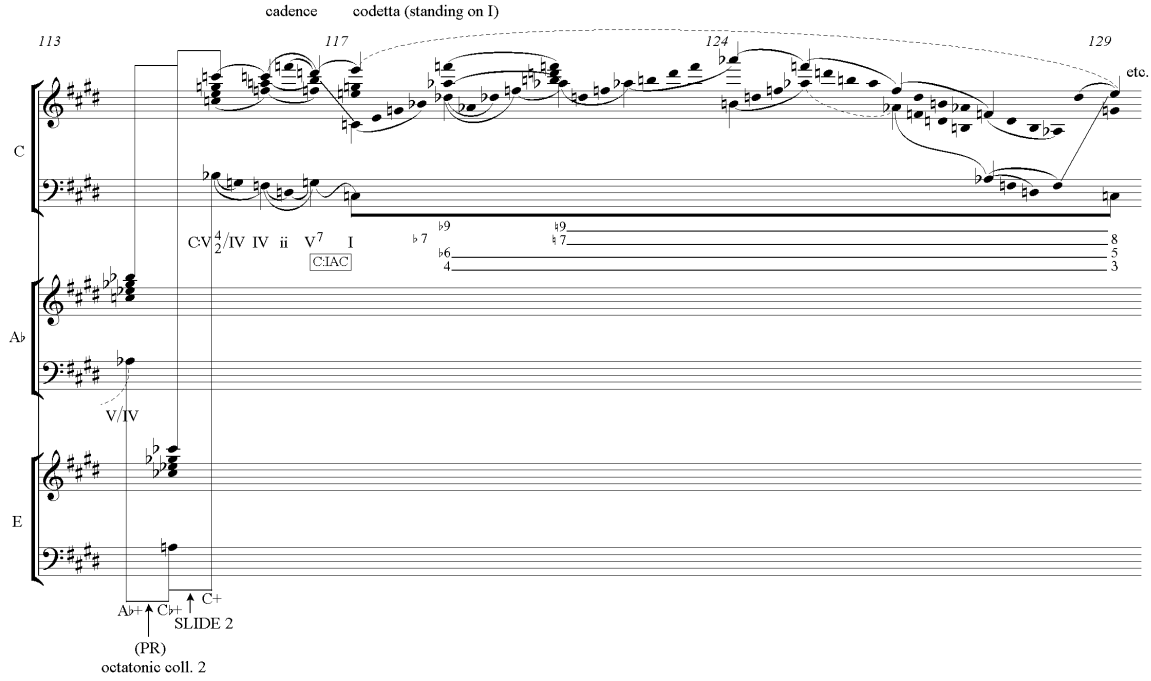



B1[1]
statement
response
continuation
65
69
73
C
A♭
E
A♭+
A♭:I V6 3 I b♭♭II6 3 V6 4 5 3 I
I:PAC
B♭+ (PR) D♭+
octatonic coll. 1
B♭:V I IV6 3 I D♭:I6 3 ii6 3 V6 4 5 3
IV:HC
B♭- SLIDE 4 B+
C♯- (H) F+
eastern hexatonic
B:I V6 3 I ii♯II6 3 V6 4 5 3 i
V:PAC

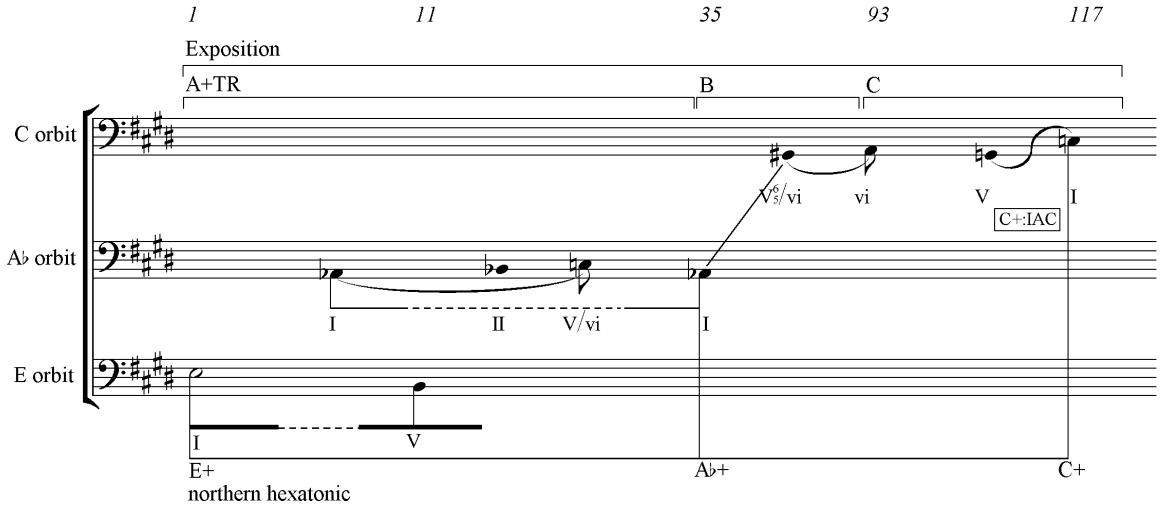

model
sequence
fragmentation
77
81
85
8-prog.
4-prog.
C
A♭
E
e♭:i V6 3 5 3 iv i
E♭- (RP) F♯-
octatonic coll. 3
E:ii I IV I ♯vii/vi vi V6 5/IV IV ♯vii/ii ii V/ii
E♭:V
D+ B♭+
(PL)
southern
hexatonic
E:V ♯vii/iii iii V/iii I V
C:I V6 5/vi
B+ C+
SLIDE 2
V6 5/iv

Example 3
Bruckner, Symphony No. 7, Finale, C group in Exposition

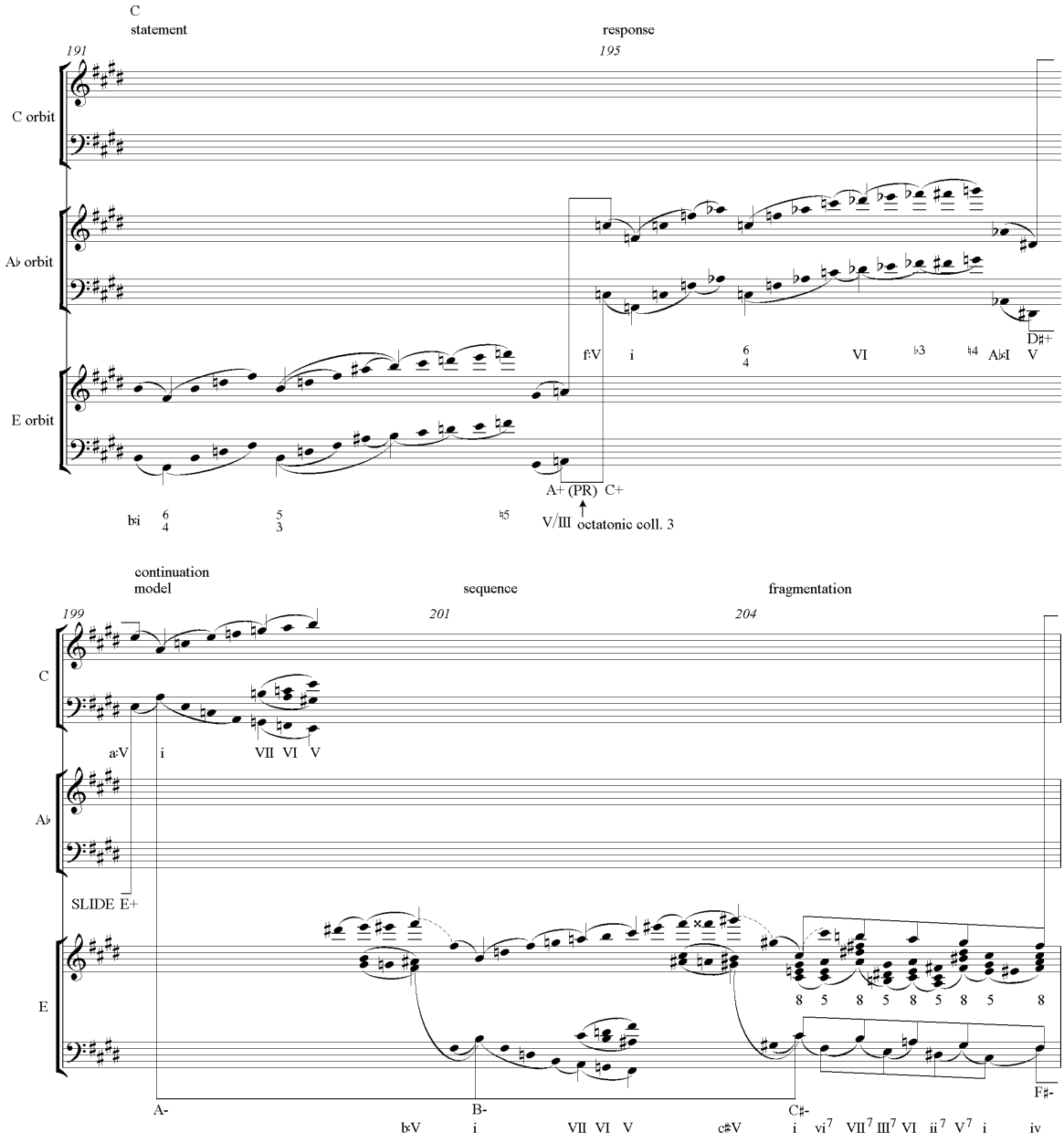


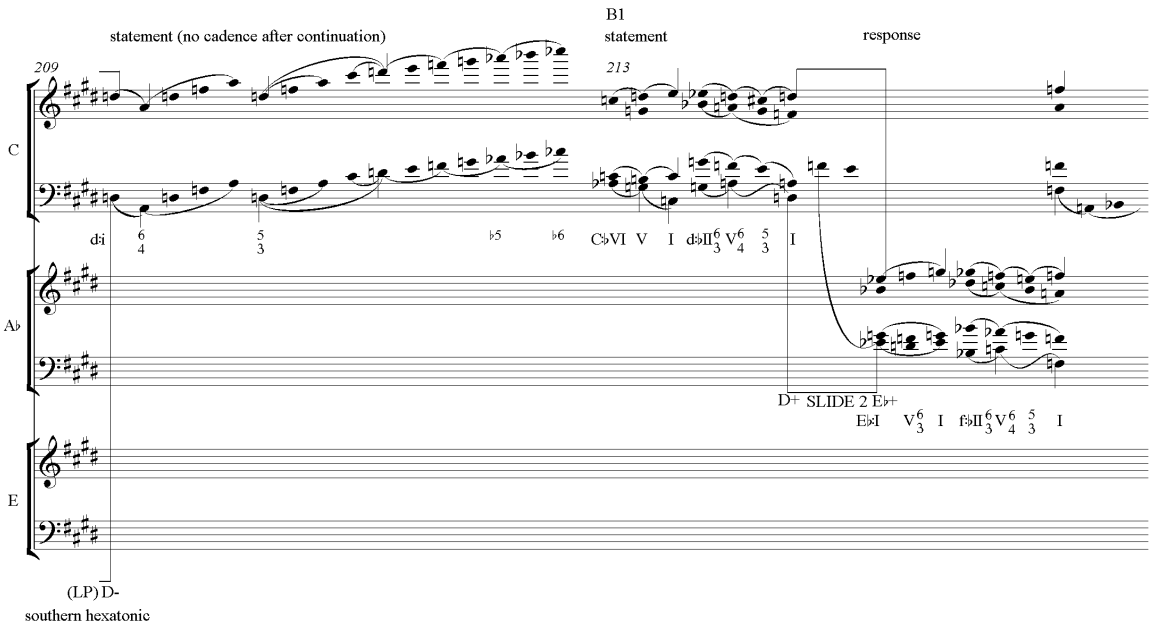

cadence
codetta (standing on I)
113
117
124
129
etc.
C
A♭
E
C:V 4/2 /IV IV ii V7 I
C:IAC
♭9
♮9
♭7
♮7
8
6
5
4
3
V/IV
A♭+
C+
C+
SLIDE 2
(PR)
octatonic coll. 2

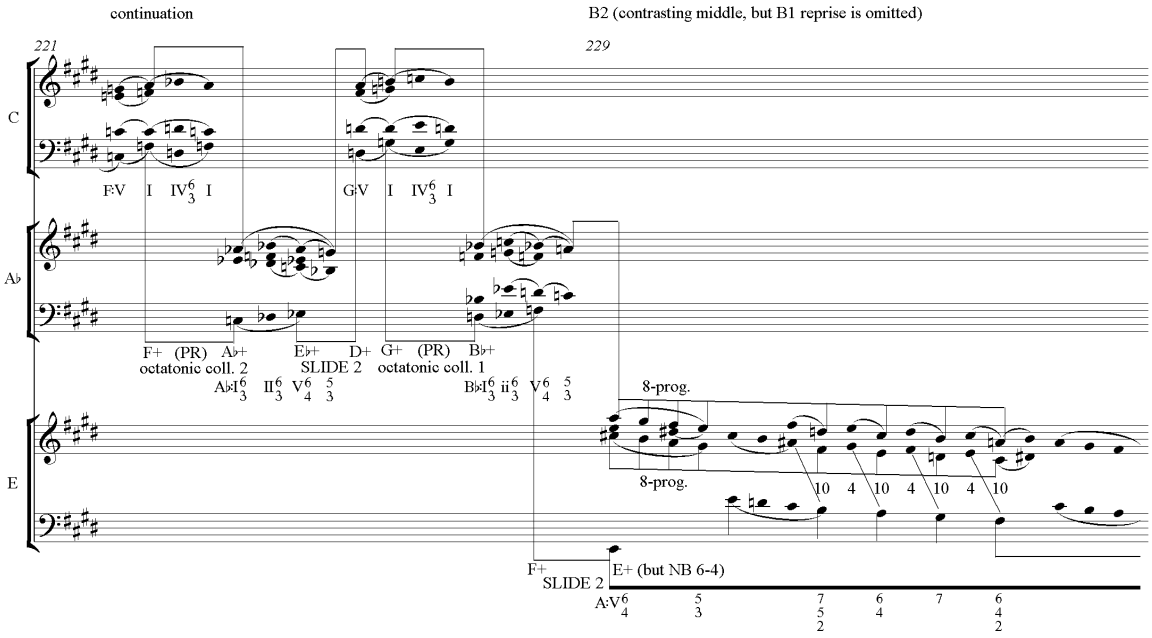
Example 4
Bruckner, Symphony No. 7, Finale, exposition, bass diagram

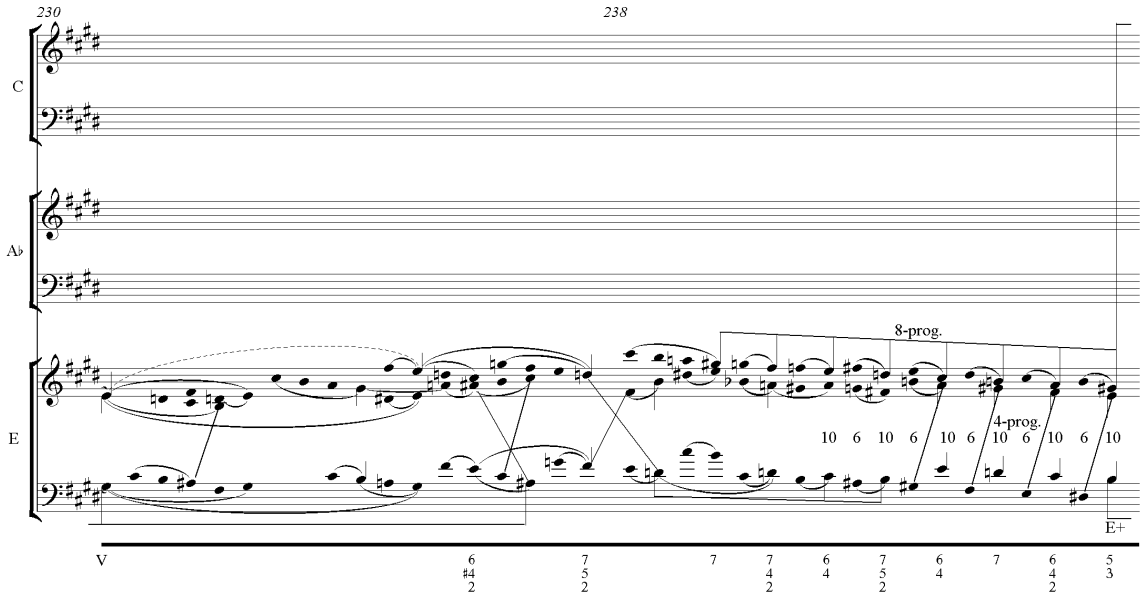


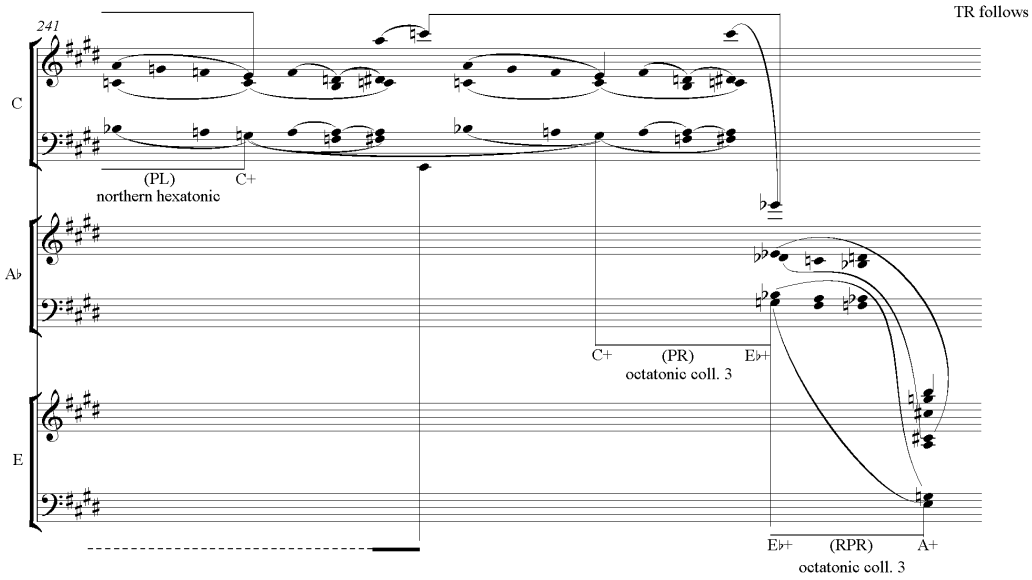
Example 5
Bruckner, Symphony No. 7, Finale, recapitulation of C and B



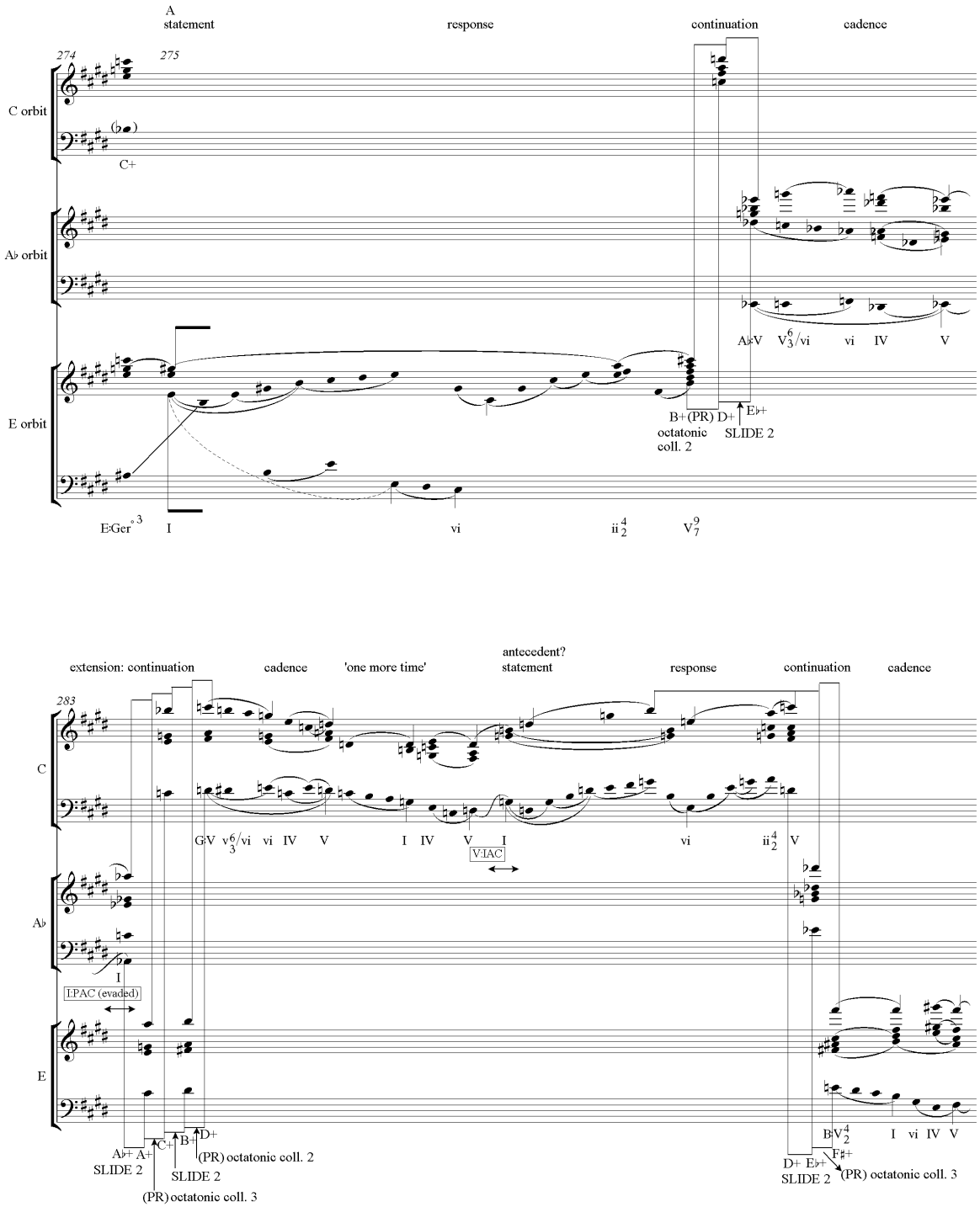

statement (no cadence after continuation)
B1
statement
response
209
213
C
A♭
E
d:i
C♭VI V I d♭II V I
D+ SLIDE 2 E♭+
E♭:I V I f♭II V I
(LP) D-
southern hexatonic

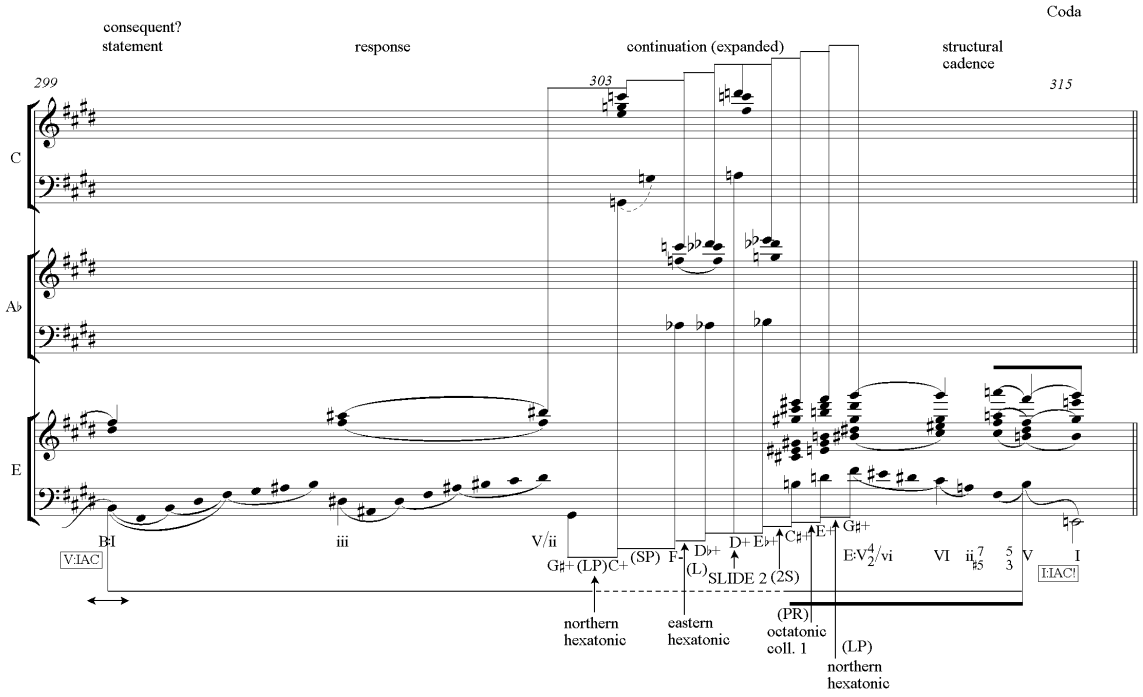

continuation
B2 (contrasting middle, but B1 reprise is omitted)
221
229
C
A♭
E
F:V I IV I
G:V I IV I
F+ (PR) A♭+
octatonic coll. 2
E♭+ D+
SLIDE 2
G+ (PR) B♭+
octatonic coll. 1
A♭:I II V
B♭:I ii V
8-prog.
8-prog.
10 4 10 4 10 4 10
F+
SLIDE 2
E+ (but NB 6-4)
A:V


230
238
C
A♭
E
8-prog.
4-prog.
10 6 10 6 10 6 10 6 10 6 10
E+
V
6 7 7 7 6 7 6 7 6 5
♯4 5 4 4 5 4 4 3
2 2 2 2 2 2 2

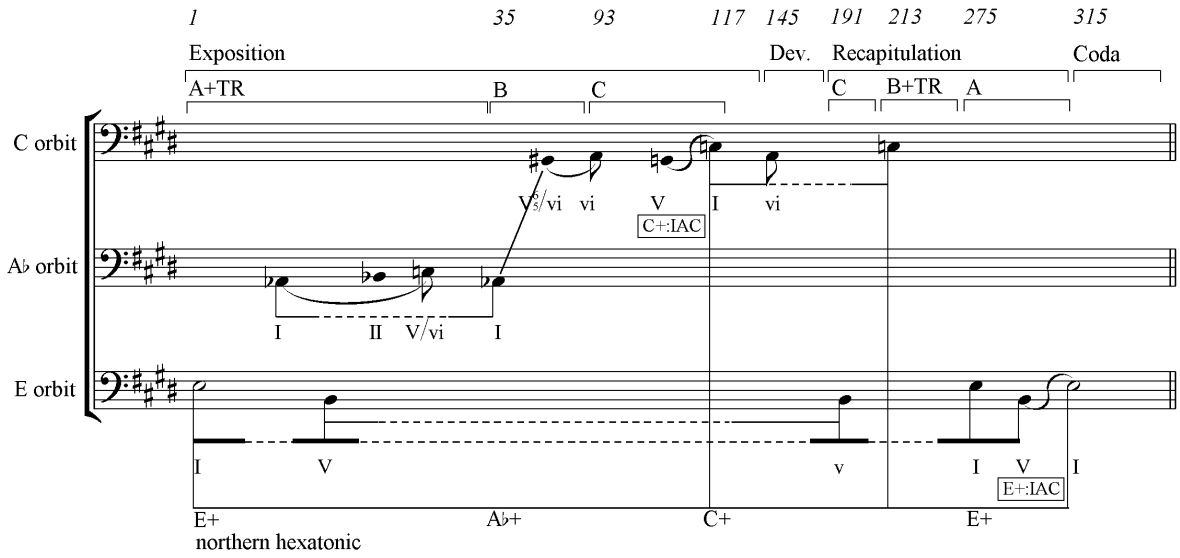

241
TR follows
C
A♭
E
(PL)
C+
northern hexatonic
C+
(PR)
E♭+
octatonic coll. 3
E♭+
(RPR)
A+
octatonic coll. 3

Example 6
Bruckner, Symphony No. 7, Finale, A recapitulation




consequent?
statement
response
continuation (expanded)
structural
cadence
Coda
299
303
315
C
A♭
E
B♮
V:IAC
iii
V/ii
G♯+ (LP) C+
(SP) F+
D♭+
(L)
SLIDE 2 (2S)
D+ E♭+
C♯+
E+
G♯+
E:V4/2/vi
VI
ii♯5 7 5 3
V
I
I:IAC!
northern
hexatonic
eastern
hexatonic
(PR)
octatonic
coll. 1
(LP)
northern
hexatonic

Example 7
Bruckner, Symphony No. 7, Finale, bass diagram



Tables

Table 1
Bruckner, Symphony No. 7/IV, formal synopsis

Bars:	1	19	35	93	145	163	191	213	247	275	315
Large-scale functions:	Exposition				Development		Recapitulation				Coda
Inter-thematic functions:	A	TR	B	C	Pre-core	Core	C	B	TR	A	

Table 2
Cadential functions in Mozart, K. 311/I and Bruckner, Symphony No. 7/IV

Mozart, K. 311/I				**Bruckner, Symphony No. 7/IV**			
Bars:	**Cadence:**	**Function:**		**Bars:**	**Cadence:**	**Function:**	
3–4	I:IAC	A-theme medial cadence	Exposition A	8–9	**b**IV:IAC	A-theme medial cadence	Exposition A
6–7	I:PAC	A-theme closing cadence		18–19	**b**V:IAC	A-theme closing cadence	
11–13	I:HC	Initiates standing on V and MC	TR	33–34	**a**II:HC	Medial caesura	TR
20	V:HC	B-theme medial cadence	B	37–38	**b**V:PAC	Ends B1-theme statement	B
				41–42	vi:PAC	Ends B1-theme response	
				46	I:HC	Ends B1 continuation phrase 1	
				50	**b**III:HC	Ends B1 continuation phrase 2	
				67–68	**b**V:PAC	Ends B1[1]-theme statement	
				71–72	vi:PAC	Ends B1[1]-theme response	
23–24	V:PAC	B-theme closing cadence (EEC)		76	**b**VII:HC	Ends B1[1] continuation phrase 1	
28–32	V: ECP	Limited scope	C	116–117	**a**VI:IAC	C-group closing cadence (EEC?)	C
32–36	V: ECP	Limited scope (‘one more time’)					
54–55	vi:PAC	Development core medial cadence	Development	170–171	iv:PAC	Development core medial cadence	Development
58–62	IV:ECP	Limited scope (corresponds to bb. 28–32)					
62–66	IV: ECP	Limited scope (‘one more time’) (corresponds to bb. 32–6)					
74–75	I:HC	Initiates standing on V and MC reprise					
81–82	I:HC	B-theme medial cadence 1	Tonal resolution B	215–216	**a**VII:PAC	Ends B1-theme statement	Tonal resolution? B
86	I:HC	B-theme end cadence (no ESC)		219–220	**a**II:PAC	Ends B1-theme response	
91–95	I:ECP	(corresponds to bb. 31–2)	C material ‘pre-ESC’	224	**b**IV:HC	Ends B1 continuation phrase 1	
95–99[1]	I:ECP	‘One more time’ as ESC! (corresponds to bb. 35–6)		228	**b**V:HC	Ends B1 continuation phrase 2	
101–102	I:IAC	A-theme medial cadence	A (functions as C)	282–283	**b**V:PAC (evaded)	A-theme interior	A

						cadence 1	
105–106	I:ECP evaded	A-theme closing cadence		290–291	[a]III:IAC	A-theme interior cadence 2	
107–109	I:ECP (‘one-more time’)			298–299	V:IAC	A-theme interior cadence 3	
				313–315	I:IAC	A-theme closing cadence (ESC?)	

Table 3
Bruckner, Symphony No. 7/IV, parametric analysis

Bars:	1	19	35	93	145	191	213	247	275	315
Reading 1: Reversed Type 3										
Large-scale function:	Exposition				Development	Recapitulation				Coda
Rhetoric:	A	TR	B	C		C	B	TR	A	
Topic:	*Buffa* march		Chorale	French overture	Chorale→ march	French overture	Chorale	*Buffa* march→ apotheosis (coda)		
Reading 2: Type 2?										
Large-scale function:	Exposition (rotation 1)				Development (rotation 2)					Coda
Thematic process:	A	TR	B	C	B- and A-based	C-based	B-based	A-based (concludes with tonal resolution)		
Tonal process:	E →		A flat→	a→C	C→a	b	C →		E	
Cadence:	C:IAC				E:IAC					

Figures

Figure 1
Bruckner, Symphony No. 7/IV, hexatonic orbital system

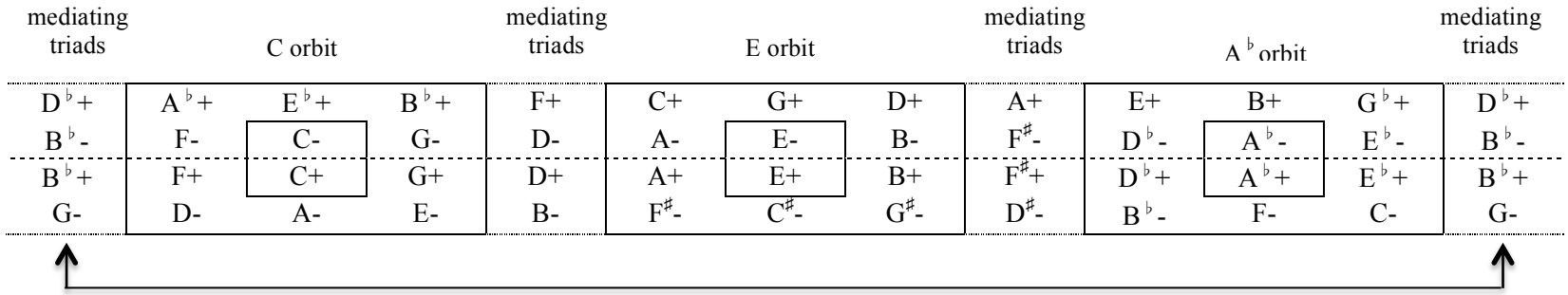


Figure 2
Bruckner, Symphony No. 7/IV, hexatonic orbital system, shared triad

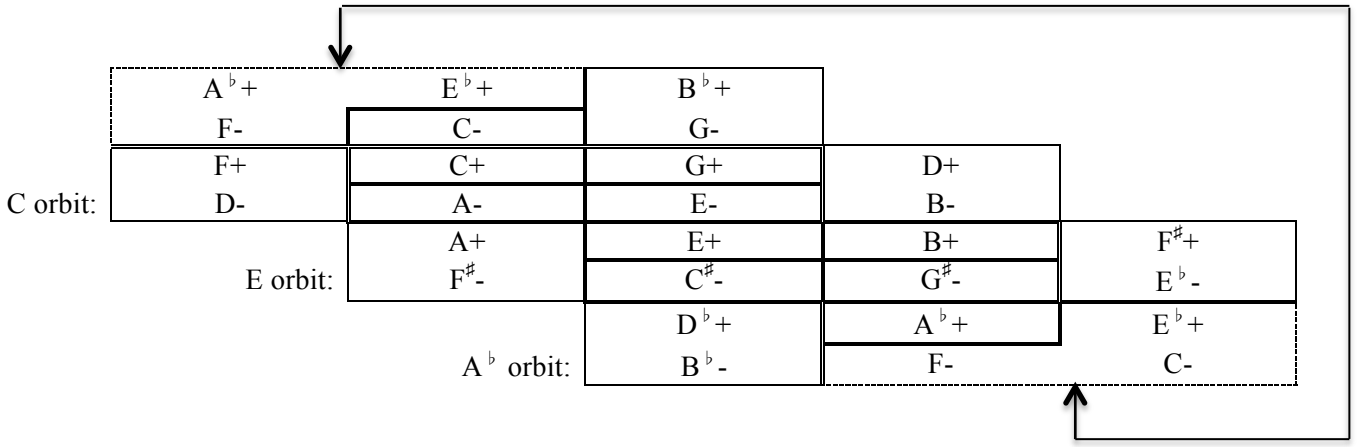


Figure 3
Bruckner, Symphony No. 7/IV, formal stratification